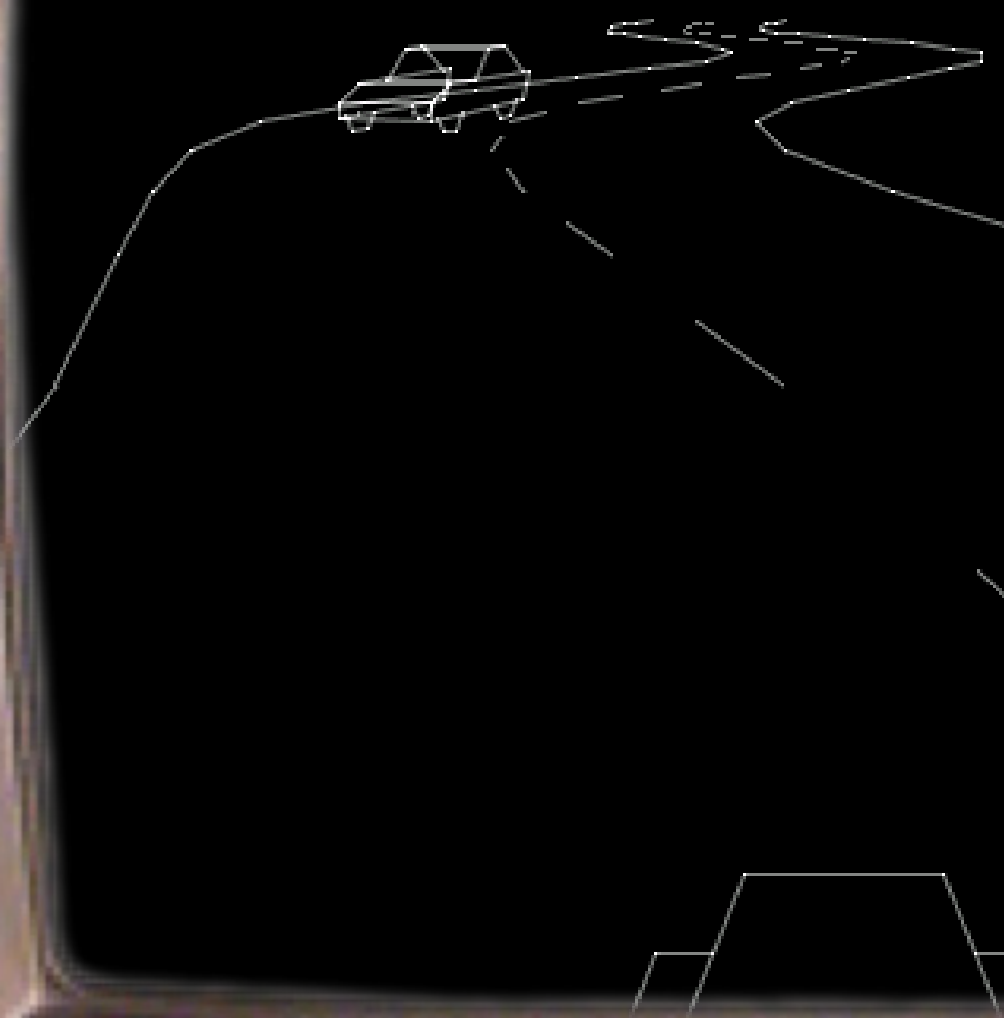
The ARCADE VIDEO-GAME "Encyclopedia" 1977-1979



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by
DaddaRuleKonge

DaddaRuleKonge

I made this book because I like to have something to do, and I like doing this sort of stuff. Cataloguing and stuff... This book (or PDF) is one in a long line of PDFs I have made since 2012. Arcade machines have never been a part of my childhood as most machines were few between and cost more than what I usually had in my pocket at the time. But I have always been fascinated by the machines (just like Pinball, also something I never really played), and to learn more of a subject, I make a book...

That's why I guess.

This book is not a real encyclopedia (that's why I put "quotation marks" on the cover), as it will almost certainly include several errors and wrong facts. But I have tried to make it as accurate as possible.

This book is a compilation of text and pictures from the internet.

Nothing is written by me, and not one picture is mine.

I made this book mostly for myself as a learning tool to get more familiar with the arcade history and games. I have tried to make the book well presented and easy to look through. But I must warn you that spelling and grammar errors are present.

If you are happy with the book then please look at some of the web-sites on the "Reference Guide" page. Find a site that you like and give them some spending money. Or give cash to something you believe in. A kickstarter project or something, i don`t know?

If you are annoyed, send an email to me: sennep@hotmail.com

from: Daniel aka DaddaRuleKonge

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12. #8 -32 x 1" Carriage Bolts (4 Req'd.)
13. #8 STL. Washer (4 Req'd.)
14. Switch Bracket (2 Req'd.)
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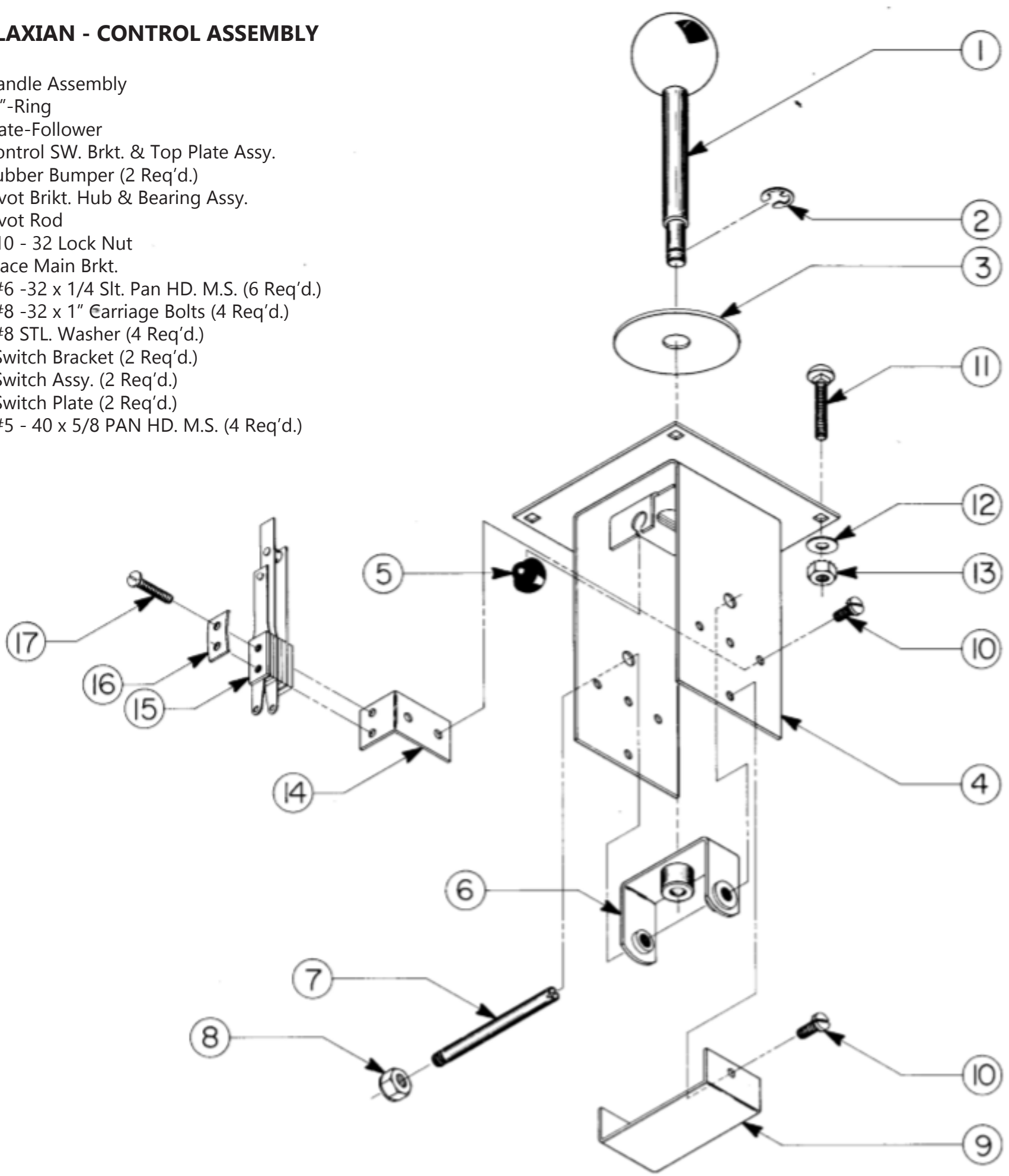
16. Switch Plate (2 Req'd.)
17. #5 - 40 x 5/8 PAN HD. M.S. (4 Req'd.)



The International Arcade Museum®

and Killer List of Videogames at Museum of the Game

• Used a lot, for both pictures, info, and as a database from what I base this book on.

This is the main place I use for info for this book. I use their "killer-list" as a base for the arcade machines release date. Their information may be incorrect on several things, but I found this place was the most comprehensive and detailed place to use information from.

https://www.arcade-museum.com/

Most of the information in this book comes either from flyers, manuals and wikipedia. If I have used another source, a credit will be shown at the bottom of the text.

These are web sites that i use alot for pictures/screenshots, reference and much of the information. I can recommend all of these websites, as they are very informative and fun to look through.
If you are the owner of one of these sites and feel that i have done you wrong, then please send me an e-mail and I will make the necessary change to your wish.

The Golden Age Arcade Historian

The Golden Age Historian

"A blog dedicated to the history of arcade video games from the bronze and golden ages (1971-1984)"

• Used for info and pictures.

An extremely well made, researched and interesting blog on coin-op machines and the history regarding them. A very big recommendation on visiting this site.

http://allincolorforaquarter.blogspot.no/

PHOENIX VIDEO GAME CLASSICS

• Used for a few pictures and info.

A personal website by a video game collector. The site include different faqs, homebrew games (?) and a collection site.

http://www.ccjvq.com/slydc/

SYSTEM 16

"The Arcade Museum. Detailed Hardware information on Arcade Hardware and Systems"

• Used for most of the hardware info and pictures. Some info on arcades.

A giant and detailed site on coin-op arcade machines and their hardware.

http://www.system16.com/

The Arcade Flyer Archive

The Arcade Flyer Archive

"The Arcade Flyer Archive (TAFA) is a digital repository for advertisement flyers that are used by the coin-operated amusement industry to promote the sales of its games. "

• Used for pictures

A giant site including absurd amount of adverts and flyers. I really recommend a look through this superb site!

https://flyers.arcade-museum.com/

GAMING HISTORY

"A gaming database featuring all coin-op, arcade games, slot machines, home video games and more..."

• Used for info.

A database on different video games, including coin-op games.

https://www.arcade-history.com/

EMULAB

"The purpose of this wiki and website is to be a repository of links and information for all arcade games for which there are no known ROM dump, due to the lack of original boards from which to obtain the necessary information. "

• Used for some info on the Undumped Wiki.

https://www.emulab.it/index.

VGMRIPS

"Welcome to VGMRips, The biggest and most active site for retro Video Game Music rips"

• Used for a some info.

A website detailing music and sound included on different video games.

http://vgmrips.net/wiki/Main_Page

Don Osborne, National Sales Manager, with Lyle Rains, Vice President of Engineering and Mary Takatsuno, Supervisor of Market Research.

"MORE GAMES. MORE HITS. MORE OFTEN. THAT'S WHEN IT'S FROM ATARI, YOU'RE ALWAYS A WINNER."

In 1977, Breakout™ was a runaway hit.
In 1978, Sprint 2™ was the industry's most profitable driving game. (It's still in the top then.)
In 1979, Atari Football™ set new records for high earnings and play appeal.
In 1980, Asteroids™ became the world's top earning attraction.
In 1981, Missile Command™ and Battlezone™ are already performing like next year's top videos.

From Pong® to Asteroids, and with all the games in between, we've been playing your game to win.

Bench strength. Consistent leadership year after year is no accident. We work to earn it, to make you the winner.

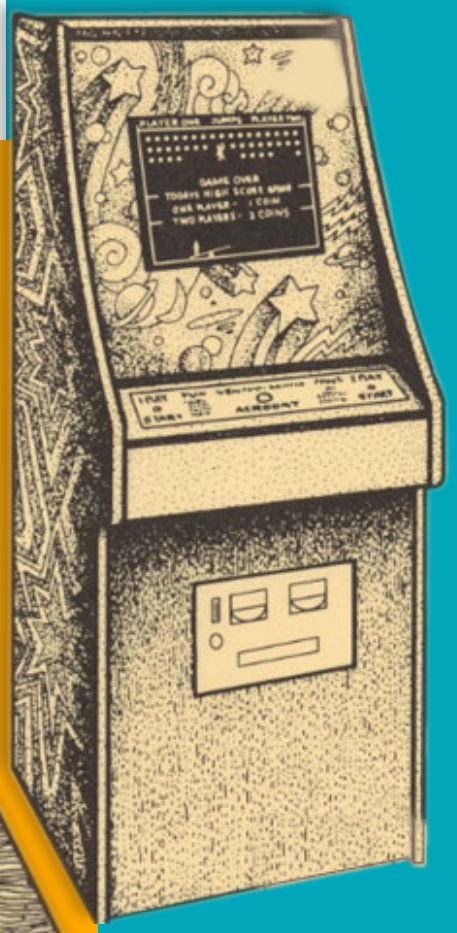
That's why we have more engineers developing more new games every day. That's why our Research department location tests every new game idea, surveys and evaluates player response on every prototype to make sure every game is the best it can be. Why our Marketing and Sales teams are continually travelling the world to get your feedback, and to help you develop new markets and location opportunities. And why our Customer and Field Service departments have become the most respected in the business.

Our dedication to excellence has become the standard of the world. We're committed to keeping it that way. So that whenever you buy Atari, you can be assured of getting the highest overall return in the business.

Talk to your Atari distributor. Find out the exciting details about Missile Command available in upright, cocktail and Cabaret

Acrobat

Manufacturer	*Venture Line*
Release	*1977*
Class	*Wide Release*
Genre	*Breakout*
Cabinet Styles	*Upright* *Cocktail*



ACROBAT

excerpt from the flyer:

The Greatest Game on Earth

Plays one, two players • Propel the jumping acrobats up to the three rows of balloons - the longer and higher the acrobats jumps, the higher the score • Instructions displayed on screen • Adjustable jumps 3, 5, 7, 9 • Top daily score displayed • The speed of the jumping acrobats increases • Bonus feature.

Super Sound Effects

B-29

Manufacturer	*Universal*
Release	*1977*
Class	*Wide Release*
Genre	*Shooter*
Cabinet Styles	*Upright*

from the flyer:

A new type of TV shooting game. If you can quickly down the B-29 that comes flying in, a new target will appear immediately, and your score will double. The intense sounds are entrancing as well.

Barricade II

Manufacturer	*Taito*
Release	*1977*
Class	*Wide Release*
Genre	*Skill*
Mode	*2 Players simultaneous*
Gameplay	*Competitive*
Panel Layout	*Multiple Player*
Controls	
	Buttons: *Directional (up, down, left, right)*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Black and White with a Color Overlay*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

Barricade II

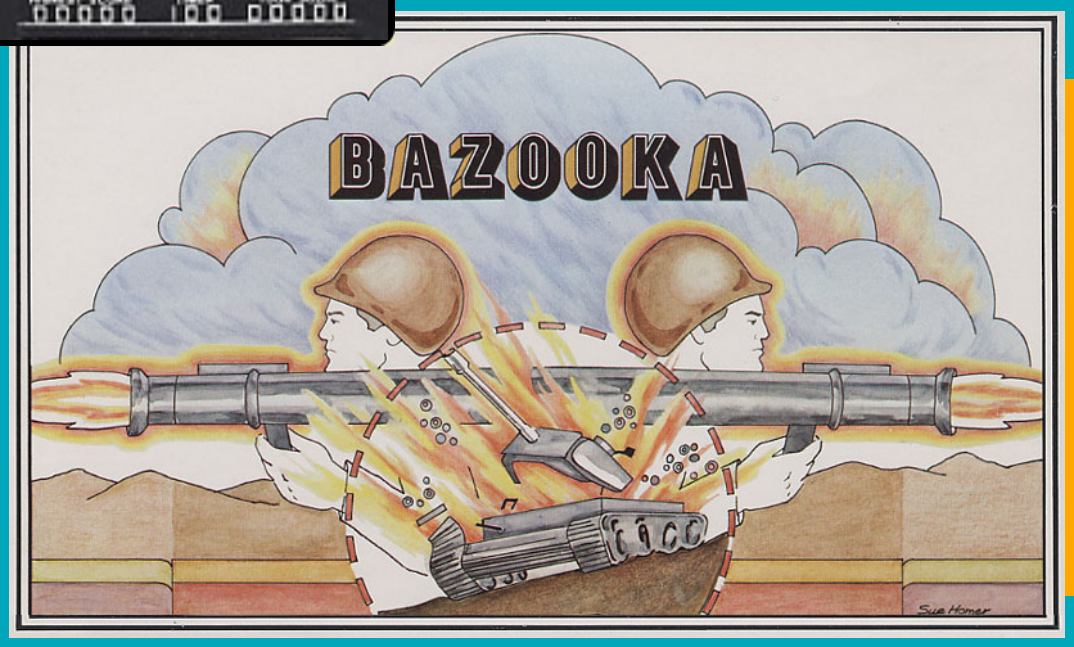
Barricade II is a two-player game where players move their cursors across the screen, creating a wall, to try and surround their opponents, forcing them to crash.

"arcade-museum.com"

Bazooka

Manufacturer *Project Support Engineering*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Sound: Amplified Mono (one channel)*
Cabinet Styles *Upright*
Mini

Bazooka is a black and white shooting game where players use a mounted bazooka to fire at enemy jeeps, trucks, motorcycles and tanks that move across the screen. They have to try not to hit the ambulances or the people carrying the stretchers.



excerpt from the flyer:

Battle it out with Bazooka! Experience the sights and sounds that immediately capture public patronage.

Backed by PSE's proven reliability and after sale service.

Utilizing a high speed microprocessing technique engineered by PSE.

"True Random" generation targets. Every game is different.

Four different value targets. Two penalty targets.

Extended play feature.

Adjustable length of game timer.

Heavy duty realistic bazooka.

Slide out platform.

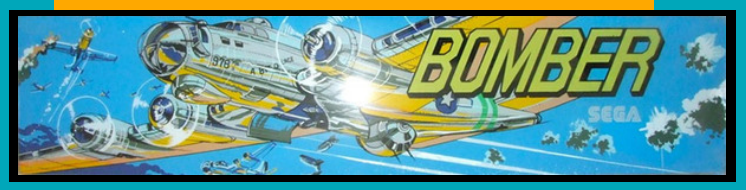
Bomber

Manufacturer *Sega*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Bomber is a side-scrolling game. Players control a (relatively) large bomber plane, and they drop bombs on moving targets - these include a scrolling pattern of basic structures, such as square “warehouses” and the like. Players have to hit structures that look like water towers (marked “OIL”) or else their plane will slowly descend into the structures and it will crash, losing one of the planes.

At the same time, smaller fighter jets will scroll across the screen in the opposite direction, and players have to shoot them. As they progress in the game, their bomber will move across the screen, until the nose touches the edge, making it considerably harder to hit oncoming fighters since they can’t see them.

“arcade-museum.com”



Battle Station

Manufacturer *Centuri*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Battle Station is big-screen, electromechanical, combat game from Centuri.

excerpt from the flyer:

- Panoramic battleground scene
- True-to-life anti-aircraft machine gun
- Battle action on fiber-glass projecting screen
- Authentic combat sound effects
- 1 or 2 players
- Adjustable extended play feature

Dimensions

Width	47”
Height	80”
Length	66”
Screen	40” x 47”
Weight	425 lbs.

Break In

Manufacturer *Mirco Games*
Release *1977*
Class *Wide Release*
Genre *Breakout*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
CRT: *Color*
Cabinet Styles *Cocktail*

Break in is a ball and paddle game from Mirco Games that was only released in Germany.

Bubble Canyon

Manufacturer *Video Games Gmbh*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Cabinet Styles *Mini*

In Bubble Canyon, blimps float over a canyon and drop bombs to burst as many bubbles as possible.

Blockbuster

Manufacturer *Elcon Industries*
Release *1977*
Genre *Breakout*
Cabinet Styles *Cocktail*

excerpt from the flyer:

Elcon Industries is proud to introduce the exciting new BLOCKBUSTER* game. 5 player-selectable games include Magic Squares, Tennis, Gravity Ball and Blockbuster. This super combination is available in a new upright cabinet as well as octagonal, round (illustrated) and rectangular cocktail table styles. In addition, our famous blackjack game, CASINO, is now available with a progressive jackpot (where legal).

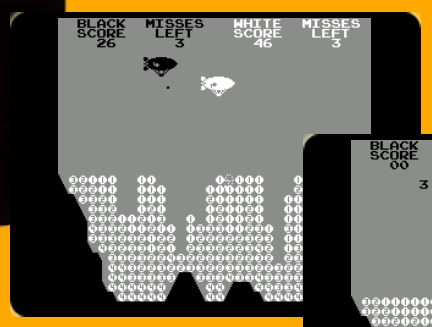
Experience Counts...
Elcon's 4 years of experience in the game industry assure superior quality of electronics as well as cabinetry. All our video games have 19" Motorola monitors and dual coin mechanisms for trouble-free operation. Should a problem arise, Elecon also operates a fully staffed service department.

Canyon Bomber

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Atari BW Raster*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Buttons: *1 [Bomb]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Canyon Bomber is a black-and-white 1977 arcade game. The game was rewritten in color and with a different visual style for the Atari 2600 and published in 1979.

The player and an opponent fly a blimp or biplane over a canyon full of numbered, circular rocks, arranged in layers. The player does not control the flight of vehicles, but only presses a button to drop bombs which destroy rocks and give points. Each rock is labeled with the points given for destroying it. As the number of rocks is reduced, it becomes harder to hit them without missing. The third time a player drops a bomb without hitting a rock, the game is over.



excerpt from the flyer:

Bombs Away!
Now players can experience the fantastic excitement of dropping bombs from WWI-type blimps and bi-planes on numbered targets filling a canyon below.

As the aircraft fly over the canyon at random speeds, players press a simple push-button control to bomb as many targets as possible without missing.

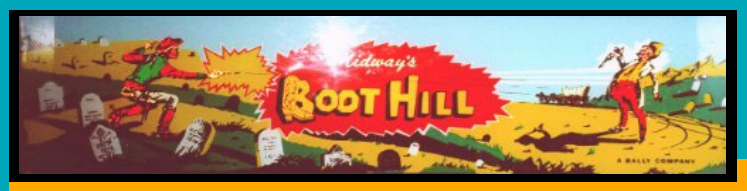
Skill and strategy in judging just the right bomb release time and angle of bomb descent to hit the remaining targets determine the amount of points achieved.

Scoring. Built-in incentive

The canyon is filled with targets that add 1, 2, 3, or 4 points to the player's score when hit.

Blimps can hit a possible 8 targets, bi-planes up to 4 targets on each pass.

Players are allowed 3, 4, 5, or 6 misses per game. If the canyon is emptied **before** the player uses up his allowed number of misses, the targets are automatically reset for a new bomb run. No bombs released during a bomb run counts as a miss.



Boot Hill is a sequel to the 1975 game Gun Fight, originally released by Taito as Western Gun in Japan.

The game is a classic one or two-player western gunfight game. Each player uses a small joystick to move their cowboy up and down the play area, while a second, much larger joystick is used to aim the pistol and shoot - this larger stick also has a trigger button. The game's single goal is to shoot the other player situated on the opposite side of the game area with the allocated 6 bullets. Wagons move up the middle and cacti litter the play area, both providing temporary cover from the opponent's gunfire and disintegrate when shot. The player may play against the machine or another person in two player mode.

The game was released in a dedicated cabinet, which mostly came in yellow. It featured side art of two different cowboys. The monitor bezel, had the game title and also a detailed cartoon scene of a few cowboys shooting each other in a graveyard on top of a hill.

It had a 23" monochrome open frame monitor that was buried deep within the machine.

This game, among other early video and non-video arcade games, were featured briefly in George Romero's horror movie classic "Dawn of the Dead" 1977. The scene, occurring about halfway through the film, features four survivors of a zombie holocaust who are seeking refuge from hordes of the walking dead in a giant shopping mall, which just happens to have an arcade. The version of Boot Hill played in the movie seems to be without the backdrop.

Boot Hill

Manufacturer *Midway*
Release *1877*
Class *Wide Release*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players simultaneous*
Gameplay *Either*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
The image is mirrored. The back drop is lit with a blacklight
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

Exciting Western Shootout
• 1 or 2 player game
• As a 1 player game... player is challenged by the computer.
• Complete player control of the Cowboys
• Changing scenes for added interest
• 3-dimensional interior
• Coordinated electronic Western music
• Built-in RAM and ROM tester
• 23" monitor
• Double 25¢ coin chutes
• Adjustable timer

Car Polo

Manufacturer *Exidy*
Release *1977*
Class *Wide Release*
Genre *Sports*
Mode *4 Players simultaneous*
Gameplay *Team*
Panel Layout *Multiple Player*
Controls
- **Steering:** *Wheel*
- **Shifter:** *2-position (forward, reverse)*
- **Pedals:** *1*

Monitor
- **Orientation:** *Horizontal*
- **Type: Raster:** *Standard Resolution*
- **CRT:** *Color*

Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Car Polo is an up-to-four player full color video game that combines the skills of driving with the intense player interaction of team sports. The object is to score by bumping or pushing the ball with a car into the team's goal. Teamwork revolves around passing and blocking strategy. Play becomes fast and furious, and excitement is enhanced by car motor noises, crash sounds, controlled grass skids and bouncing ball motions.

Car Polo was designed and programmed by Howell Ivey for Exidy, and is one of the first games to use the combination of a microprocessor for running the game logic plus a color display.

"mamedev.org"

excerpt from the flyer:

Exidy Excitement!

CAR POLO is our new 1, 2, 3 or 4 player **FULL COLOR** video game that combines the skills of driving with the intense player interaction of team sports.

THE OBJECT of **CAR POLO** is to score by bumping or pushing the ball with a car into you team's goal. Teams and goals are defined by red and blue colors. After each score an animated **EXIDY REFEREE** resets the ball at center field and announces **"GET READY."** Cars are reset at each end of the field and play resumes. Unselected cars are caomputer-controlled and play automatically. **BOLD COLOR** alpha numerics display time, score, and announce **"GAME OVER - DEPOSIT COIN."**

TEAMWORK resolves around passing and blocking **STRATEGY**. Play becomes **FAST** and **FURIOUS**, and **EXCITEMENT** is enhanced by realistic car motor noises, crash sounds, controlled grass skids and bouncing ball motions.

EXIDY'S Car POLO comes in a rich brown cabinet with **DETAILED COLOR GRAPHICS, EASY ASSEMBLY**- secure canopy only. **CAR POLO** is a single unit 29" wide, which easily **FITS TROUGH A STANDARD DOOR. CAR POLO, WITH or WITHOUT** a **CANOPY**, enhances any location. **MODULAR DESIGN** features slide out monitor and logic board, separate steering and foot control units.

Checkmate

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Skill*
Hardware *Midway 8080*
Mode *4 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *4-way*
(up, down, left, right)
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
with a Color Overlay
The entire screen is covered with a blue overlay
Sound *Amplified Mono*
(one channel)
Cabinet Styles *Uprigh*
Cocktail

Checkmate can be played by one to four players. A one-player game is played against three computer players. After coins have been deposited, players press the proper "number of players" button to start the game. The object of game is for a player to direct the moving arrow (marked "1", "2", "3", or "4" respectively) and avoid crashes. A player is eliminated when the moving arrow crashes into another object. Play continues until one player is left. After a crash, the remaining player or players score one point each. When one player remains, that is the end of one "round" of play. Depending on the DIP switch settings, there can be two to five rounds of play per game.

The cabinet has a design similar to that of Sega's Turbo with its overhanging "hooded" top piece. The speaker grill is integrated into the marquee. The control panel, while having joysticks for four players, is no larger or wider than a standard cabinet (for that time).

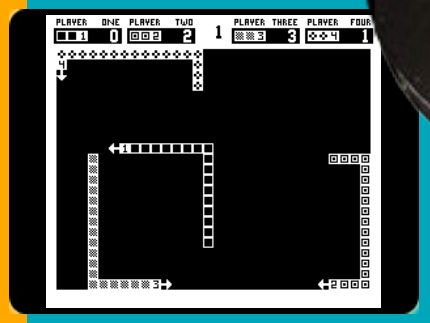
The logic boardset and power supply are similar to other Midway 8080-type games, and also shares the same problems associated with them (most notably failure of RAM chips over time). There are DIP switch settings for English, German, French, or Spanish test (on screen), as well as a TEST mode for trouble-shooting.

"arcade-museum.com"

excerpt from the flyer:

An intense strategy & reaction game matches skills against the computer & the treachery of up to 3 opponents!

- Upright & Cocktail Models
- 1-2-3-4 Player Game
- 8 Directional Joy Stick Control
- Rotating Player Position on Playfield
- Variable Scoring (3-2-1-0)
- 5 Languages
- Exciting Electronic Music
- Micro Processor Logic Board
- Double 25¢ Doors
- 23" Solid State Monitor in Upright Model
- 19" Solid State Monitor in Cocktail Model



Circus

Manufacturer *Exidy*
Release *1977*
Class *Wide Release*
Genre *Skill*
Board pin *Circus Pinout*
Mode *2 Player*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Sound: Amplified Mono (one channel)*
Cabinet Styles *Upright*

Circus is a re-themed variant of Atari's Breakout, where the player controls a seesaw and clown in order to pop all the balloons in the level. The game has been copied and released under different names by numerous other companies in both the United States and Japan.

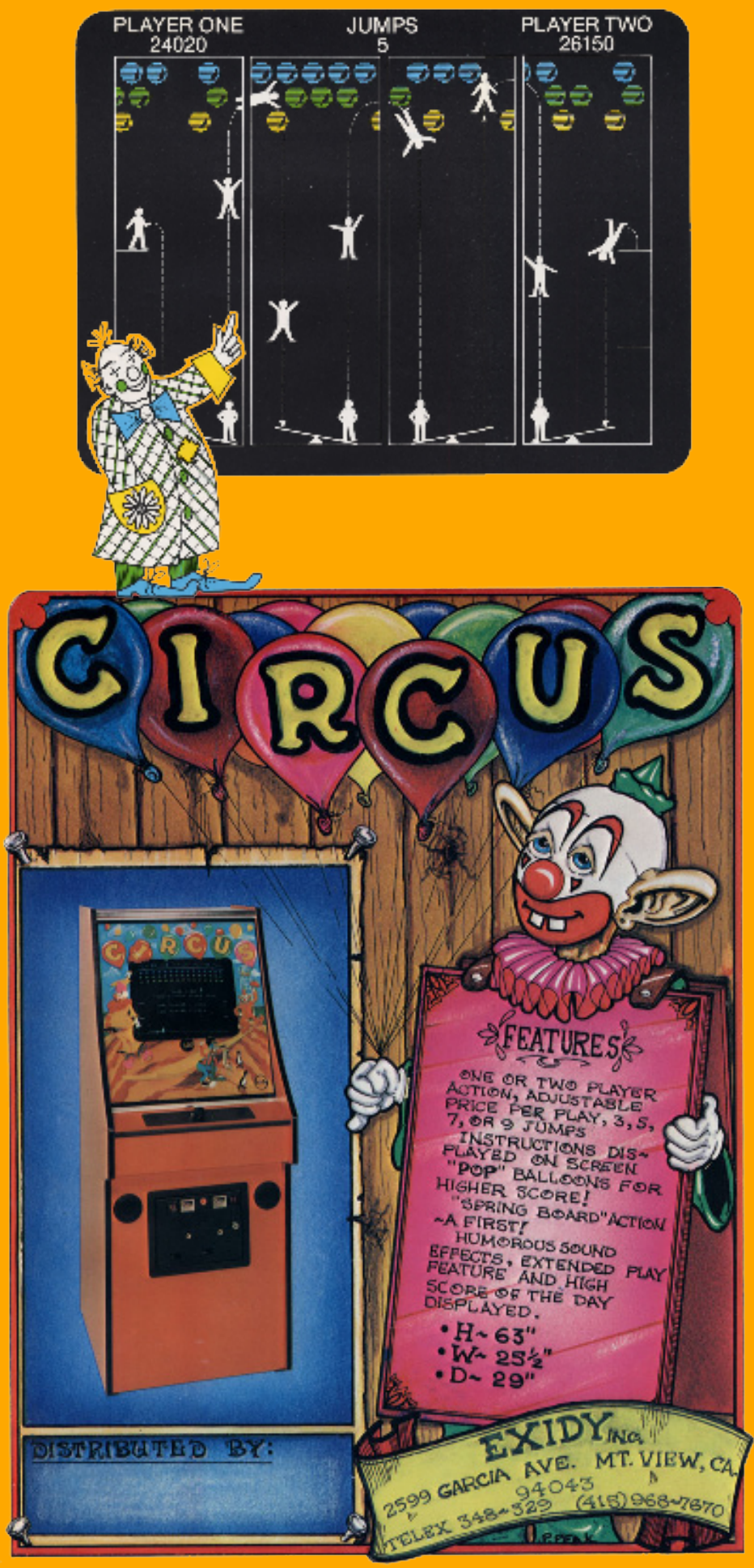
Three rows of triangular balloons move along the top part of the screen, each overlaid with blue, green, and yellow, counting from the top row. A clown appears from the edge of the screen where there is a jumping board, and the player must move the seesaw located at the bottom of the screen so that the clown can bounce back off the seesaw once he jumps off from his starting position. However, it is impossible to make contact with the clown with the seesaw in certain locations. The 4 jumping boards located on the sides of the screen serve to decrease the area where it is impossible to make contact.

If the player successfully gets the clown onto the seesaw, the clown on the other side shoots off into the air towards the 3 rows of balloons on the top of the screen. The clown may not have enough speed to reach the balloons if the first clown does not land squarely on the seesaw. Clowns bounce off of balloons, walls, and jumping boards, but will pass directly through multiple balloons if they are moving quickly enough. They will only bounce off the jumping boards when they are heading downwards, and will pass straight through the boards while moving upwards.

Hitting any of the balloons with the clown causes them to burst, and the player receives 20 points for bursting the yellow balloon, 50 points for the green balloon, and 100 points for the blue balloon. Bursting the entire row of balloons causes a sound effect and awards the player 10 times the original points as a bonus (i.e. 200 points for the yellow balloon). A new row of balloons instantly replaces the old one when the entire row is destroyed.

Destroying all of the blue balloons causes another sound effect and allows the player to play one more time (1 clown) after they have depleted their stock. The words "BONUS PLAY" appear to indicate this bonus, but destroying all of the blue balloons a second time will not allow the player to gain another clown (the bonus can be activated while the player is using the extra clown). This may differ in certain levels like 7 and 8, where all 3 rows of balloons must be destroyed in order to active the bonus.

A clown will die if the player fails to receive them with the seesaw at the bottom of the screen, and 2 measures of the funeral march in Frédéric Chopin's Piano Sonata No. 2 are played as a sound effect.

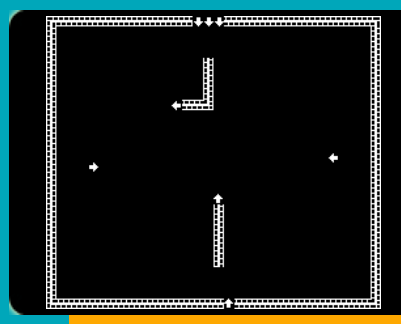


Combat

Manufacturer	*Bertolino*
Release	*1977 ?*
Genre	*Shooter*

COMBAT

Bertolino seems to be some kind of shooter. The game was released in Italy.



Comotion

Manufacturer	*Gremlin*
Release	*1977*
Class	*Wide Release*
Genre	*Skill*
Mode	*4 Players simultaneous*
Gameplay	*Competitive*
Panel Layout	*Multiple Player*
Controls	
	Buttons: *Directional (up, down, left, right)*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Cocktail*

excerpt from the flyer:

The original trail blazing smash hit by Gremlin that plays standing up... or sitting down!

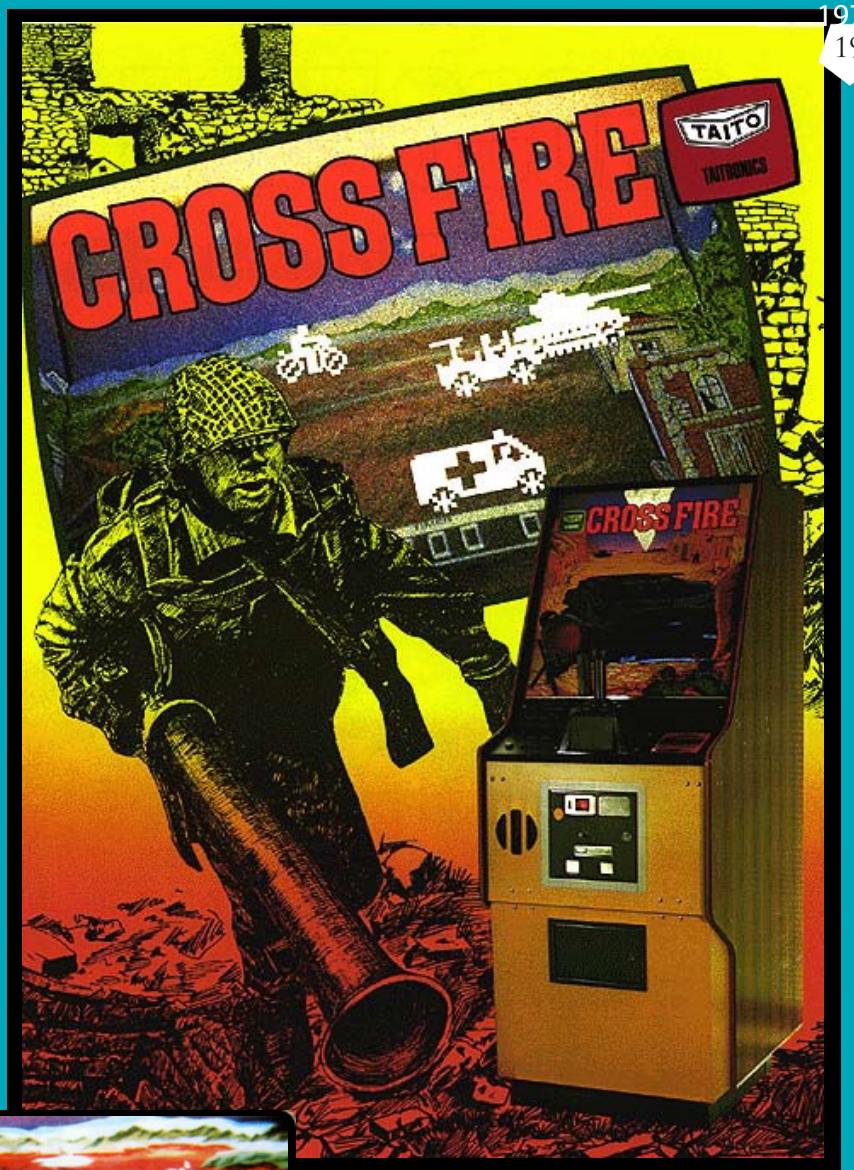
DESIGNED FOR PLAYER APPEAL! screen that's ALIVE with bright fast-moving action... even when it's not being played, its advertising sequence COMMANDS attention! Irresistible SOUND! Easy to learn, and CHALLENGING!

To operate the games each player has a set of 4 buttons (north, east, south and west), which change the direction of the player's own advancing arrow. The aim of the game being to manoeuvre the arrow and create a track which blocks the path of the opponent and in so doing, forces the opponent to crash into a track.

Crash Course

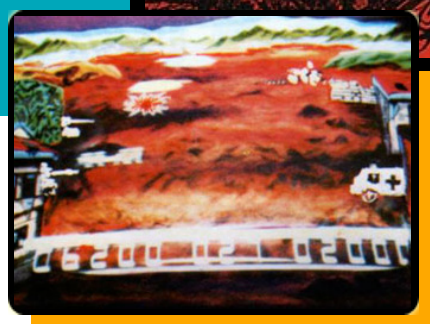
Manufacturer *Sega*
Release *1977*
Genre *Skill*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Either*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Crash Course is essentially a discrete logic version of Blockade. It is a 1 or 2 player game where players move their cursors around the screen creating walls to try and force the opponent to crash.



Cross Fire

Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Cross Fire is a black and white shooting game where players use a mounted bazooka. The game is a clone of Bazooka (1977).

excerpt from the flyer:

- Insert coin(s), military targets and penalty targets appear randomly on the screen and the timer resets to '100'.
- The military targets have four different values. TANKS(200), TRUCKS(400), JEEPS(600), and MOTORCYCLES(800). These targets move right to left and left to right.
- While carefully avoiding the STRETCHER-BEARER and AMBULANCE penalty targets, press the trigger button on the bazooka handle and shoot the enemies.

Depthcharge

Manufacturer *UPL/Gremlin*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Sega VIC Dual*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *2 [Fire Left|Fire Right]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Aqua-blue monitor plexiglass
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Depthcharge, which uses a black-and-white CRT display, presents the player with a cut-away view of a section of ocean, on the surface of which is a destroyer with submarines passing beneath it. The player drops depth charges (up to six at a time) to destroy the submarines and moves the ship back and forth in order to avoid the submarines' mines. Up to four submarines may be present at any given time, each of which bears a score for destroying it that increases with its depth.

excerpt from the flyer:

No easy shot

The beginning player can have a great time with DEPTHCHARGE. But the more skill he develops, the more challenging it becomes. That's because there's no straight line to the target. With subs moving at different speeds, the player must anticipate where each will be at the time his depth charge reaches that particular depth.

Layers of challenge

The high-score subs near the bottom are hardest to hit because there's much more distance to judge. Also, the low point subs near the surface explode depth charges aimed for high points subs below. A good player can avoid being sunk while knocking out 70 per cent of the subs. It's that last 60 per cent that's hardest to achieve.

New and improved

DEPTHCHARGE could be called DEPTHCHARGE II because this is the second version. The original was ready a year ago but didn't meet high Gremlin standards in arcade tests. So the company spent more time and money to fine tune it, adding another full market test. Now DEPTHCHARGE has all the polished elements that make a good game. Most important - repeat play.

Sound sensation

One of the biggest features of DEPTHCHARGE is the spectacular explosion, sinking and water sounds. Its sonar is particular realistic. And Gremlin is the only game company to make volume control easily accessible in the front panel.

TO SCORE, HIT SUBMARINE WITH DEPTHCHARGE.
MOVE THE DESTROYER WITH THE LEFT HAND CONTROLS AND LAUNCH DEPTH CHARGES WITH THE RIGHT HAND CONTROLS.
AVOID THE MINES RELEASED BY ENEMY SUBS. IF YOUR DESTROYER IS HIT, YOU LOSE HALF YOUR SCORE.
EXTENDED TIME AWARDED FOR SCORE OF 500 OR MORE.
30 POINT BONUS PER SUB AWARDED AT FINISH. CARRY ON SKIPPER!
MOVE SHIP
FIRE CHARGES

An explosive new game
DEPTHCHARGE
Gremlin's first thematic game is an action-packed, sound sensation that scores a direct hit for repeat play.
Fire one for action
sink the submarines moving below at different speeds.
Fire two for challenge
aim for higher-point, harder-to-hit subs as your skill increases.
Fire three for strategy
launch each depth charge at the right time, right place.
Fire four for defense
steer the ship to avoid random mines that cut your score in half.
Fire five for suspense
add bonus points when time runs out for each sunken sub in the "graveyard."
Fire six for incentive
beat the high score to date, recorded on screen between games.
Gremlin
The games people really play.

Sub Hunter is a licensed version of Depth-charge. It was released in Japan by Taito.

excerpt from the flyer:

• ***Destroyer vs submarines... new explosive push-button warfare***

Down go the depth charges, up comes the mines! You get the subs or the subs get you. Exploding depth charges and mines, realistic sonar effects plus thre-dimensional color background scenery give players the full benefit of sea battle realism.

The actual fun and challenge of the game is to sink as many subs as possible while evading the upcoming mines by skillfully maneuver the destroyer or by detonating them with depth charges. Subs moves at random speeds and at different depths, making it extremely difficult to score direct hits on depp-going subs. The deeper the sub position, the higher the point when a direct hit is scored. To score a direct hit, the player must calculate the speed and depth of each sub and fire the depth charge at the right time and place.

• ***Scoring for marksmanship***

Each time a submarine is knocked out of action, 10 to 80 points (depending on depth) are added to the score. Of course, deep-down subs - when sunken - give the player higher points because they are much harder to hit. But be careful! If the destroyer is hit by a mine, that cuts the score in half. When the game ends, a 30-point bonus is added for each sunken sub in the "graveyard." The highest score of the day is registered on the screen between games for challenging.

• ***90-second game time plus bonus play time***

If the score is 500 points or higher at the game end, the player automatically gets and additional 45 seconds of excitement. The remaining play time is displayed on the upper, left corner of the screen.

• ***Specifications***

Dimensions:
1,650 (H) x 650 (W) x 800 (D) mm
Weight: 85kg.

Each time a submarine is knocked out of action, 10 to 80 points (depending on depth) are added to the score. Of

Sub Hunter

Manufacturer	*Taito*
Release	*1977*
Genre	*Shooter*
Cabinet Styles	*Upright*

1977
22

Desert Gun

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

MIDWAY'S
DESERT GUN

Desert Gun is a a shooting game that takes place in a desert where players try to shoot roadrunners, buzzards and other animals. It is the same game as Midway's Road Runner gun game with only slightly different back glass and cabinet graphics.

Desert Patrol

Manufacturer *Project Support Engineering*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Three-dimensional black-light interior graphics
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Upright*

In Desert Patrol, players must hit aircrafts with a heavy duty double barrel machine gun.

excerpt from the flyer:

Experience the true sights and sounds that immediately capture public patronage.

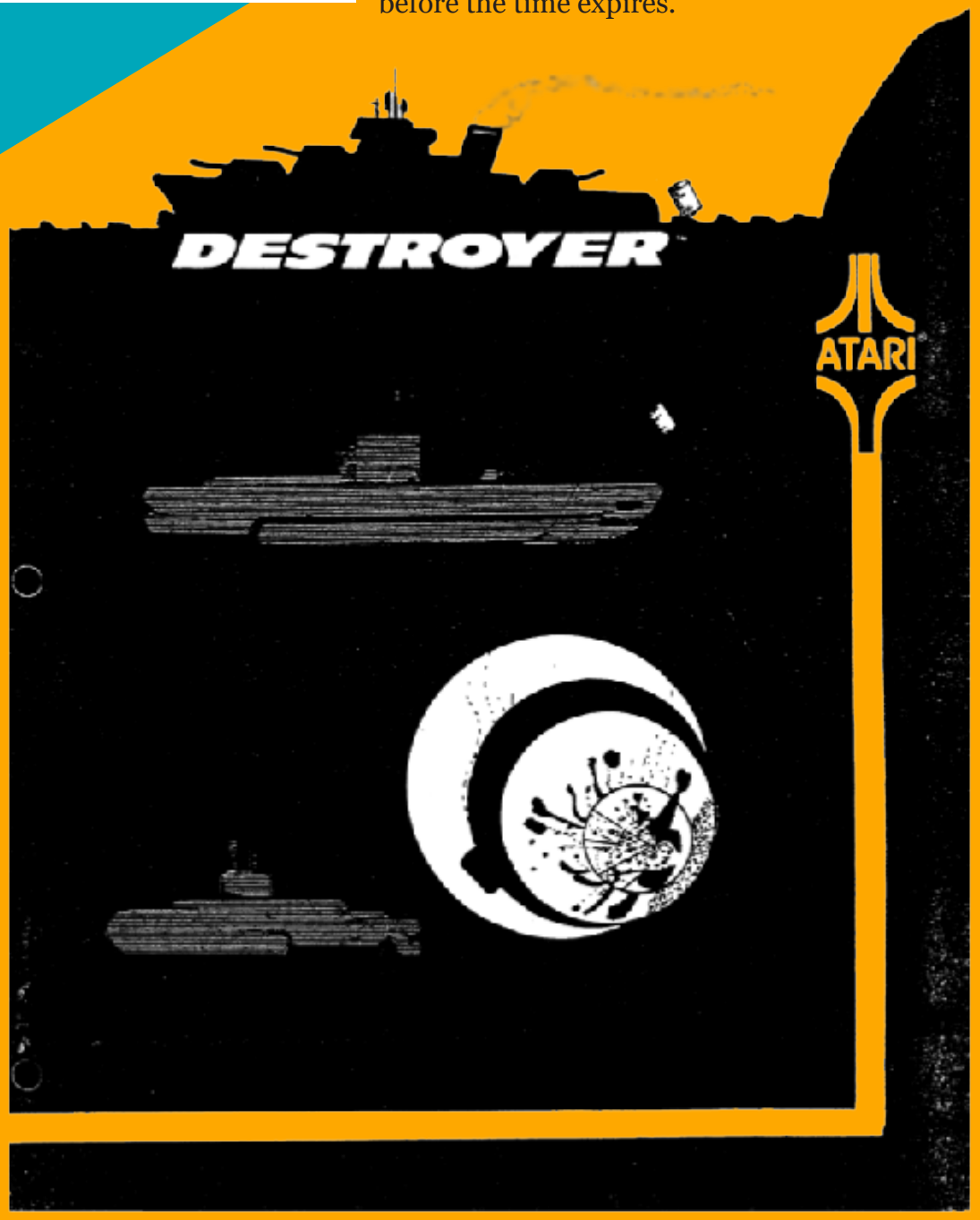
Utilizing a high speed microprocessing technique engineered by PSE.

Backed by PSE's proven reliability. Featuring NEW improved after sale service.

Destroyer

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Motorola 6800*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

In Destroyer, the player attempts to sink ships and destroy submarines from the perspective of a naval destroyer. The playfield displays the players ship moving across the surface (displayed as a wavy line) and submarines moving across the screen. The target depth is set using a dial control (displayed as a dashed line). Depth charges are dropped by pushing the dial control. The speed of the ship is controlled using a speed lever control. Charges that miss make a low boom. Charges that hit make a louder boom and trigger an explosion sequence. Points are awarded for successful hits. The game is timed, so the goal is to sink or destroy as many submarines as possible before the time expires.



In 1978, coupled with Atari's Canyon Bomber was a game called Sea Bomber which was "basically a port of Destroyer".

excerpt from the flyer:

This all new video battle action game is a direct hit for high repeat play.

It challenges **skill**... Players control the speed of the destroyer with fast or slow speed settings.

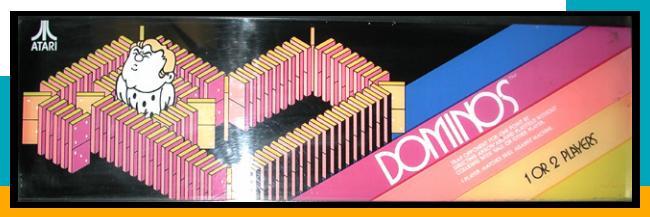
By turning the control, players move a horizontal line, visible on the monitor, that shows depth at which depth charge will explode when released.

It challenges **timing**... By pushing the control, players zero in the depth line marker on randomly running subs and launch one to four depth charges at just the right time to score a hit.

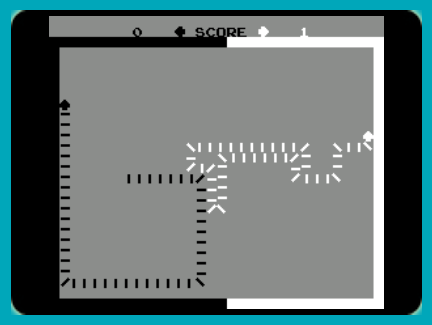
It challenges **incentive**: Highest score to date is displayed in the Attract Mode.

Dominos

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Skill*
Hardware *Atari BW Raster*
Board pin *Dominos Pinout*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Buttons: *Directional (up, down, left, right)*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Stereo (two channel)*
Cabinet Styles *Upright*
Cocktail (4 player)



Players place Dominos in an attempt to cause their competitor to run into their trail. Play begins slowly, but speeds up as time progresses. Players change direction based upon their button presses.



excerpt from the flyer:

The Atari "Domino Effect": Higher earnings!

All new Dominos pits one or two players against one another in a head-on-head battle of wits and strategy.

Players control the direction of a simulated wall of dominos with a set of 4 instant-response push-buttons.

Each player's wall starts out in one direction at the opposite sides of the screen. The player progressively builds his wall by pushing the appropriate button (left, right, up or down) for the desired direction.

The speed of play increases as the action progresses, adding to the challenge.

A black domino set for one side, a white for the other reduces the possibility of a player watching the wrong wall.

The object is to trap your opponent into running into your wall or his own. Precise timing and planning your moves in advance are the keys to winning.

Dominos "fall" when opponent's wall is hit or player bumps into his own wall.

2 players can compete against each other. Or 1 player can challenge the computer

The single player game plays like the 2 player version, except the opponent is the opponent is the computer, and it's programmed to counter strategy and trap the player if he makes a mistake.

Operator Options:

Number of points to win.

Total points to win per game is adjustable to 3, 4, 5, or 6, changing the overall length of the game.

Coinage.

Dominos can be adjusted to 1 or 2 coins per player or 2 plays per coin.

Exclusive self-test program.

As in all new Atari video games, highly reliable micro-processor logic allows a unique audio/visual options and self-diagnostic program to be built in. The program self-tests all micro-processor and memory functions. It also allows testing of all switch positions including 2 coin switches and all pushbutton control buttons.

Double Play

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Sports*
Hardware *Midway 8080*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Rotary: *Analog [Move Outfielders]*
Joystick: *4-way (up-left, down-left, up-right, down-right) [Pitch Control]*
Buttons: *1 [Swing]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

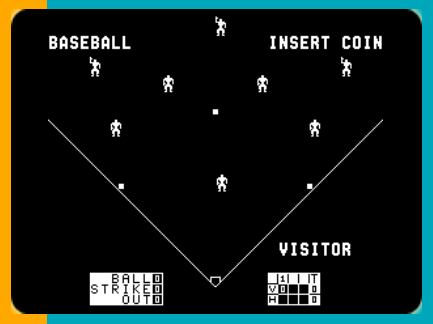
Double Play is a baseball arcade game which was released by Midway Games in 1977; it utilizes an Intel 8080 microprocessor running at 1.9968 MHz, and is the sequel to Tornado Baseball, which was released in the previous year. Unlike in the original, it is now possible to play against the CPU (which will always start as the pitcher then take on the batter role after three outs have occurred) - but in the case of a two-player game, both players will again play on the same $0.25. The pitching player must now use a diagonal 4-way joystick to select one of only four different pitches as opposed to the eight of the original, while using a rotary controller to move the outfielders left and right; the batting player, however, must now again only use one button, to swing his bat. On the upright cabinet, both players will also again be using the same set of controls, and will again have to change places in front of the cabinet every time three outs occur - however, with the cocktail cabinet, they will have no need to do this because of the dual controls. The number of innings you will receive for one coin again depends on how the cabinet is set, but if it's less than nine you'll again have to insert another coin to continue.

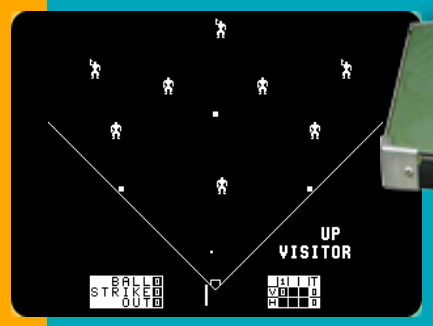
"strategywiki.org"

The cocktail version was released in a unique six-sided cabinet where players sit side by side, similiar to the Joust cocktail, but deeper.

excerpt from the flyer:

- 1 or 2 player game
  Player vs Computer
  Player cs Player
- Electronic music coincides with action of game
- Complete outfielder control
- Dual Control - players can alternate without changing positions
- 2 or 3 inning game can be played with extra coins
- Automatic pitching feature - speeds up game
- Players can make double plays and errors
- Walk control feaure
- Proven micro processing system with built in rom and ram tester
- Double Coin Chutes
- 26 1/2W (67 cm) x 32" D (81 cm) x 67"H (170 cm). 245 lbs.





Drag Race

Manufacturer *Kee Games*
Release *1977*
Class *Wide Release*
Genre *Racing*
Hardware *Atari BW Raster*
Board pin *Drag Race Pinout*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player Ambidextrous*
Controls
Steering: *Wheel*
Shifter: *4-position (1/2/3/4)*
Pedals: *1*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Multi-colored overlay: separate colors for each track plus red, yellow and green for the start tree
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Kee Games' Drag Race is a skill-based video action game designed for one or two players. During game operation two dragster car figures appear on the screen of a 23-inch black-and-white TV monitor mounted at the top front of the cabinet. An overlay of colored transparent material is affixed to the glass on the face of the TV tube. During play the overlay filters light coming from the screen so that portions of the TV picture will appear highlighted in color. The cabinet is white with colorful graphics.

The game uses working analog tachometers so players would know when to shift. Revving too high will cause the engine to blow. If players shift too soon, their speed will stay low because the engine won't be going fast enough to handle the gear.

excerpt from the flyer:

Another ATARI exclusive!
Realistic Drag Racing action.
Now, from Team Atari, comes the first video game to offer the white-knuckle thrills of competitive drag racing.

Drivers compete against each other and the clock.

As in real racing, a sharp eye on the tach, split second timing (and staying off the fences) is required for fastest race time.

The race begins with amber-to-green countdown lights. (A jumped start gets a red light and a penalty message.)

If a missed shift over revs the engine and "redlines" the tach, "engine blown" appears on the monitor and the player has to restart.

Dragsters do "wheelies", tires smoke, and cars pop drag chutes at the end of a heat, adding to the fantastic realism.

Instant Replay
Nobody can resist trying for better times. Drag Race is an irresistible attraction for any type of location.
Exclusive Operator Options Game Time is adjustable to 3, 4, or 5 "heats" per game.
Volume: Sound level can be adjusted to suit any environment.
Extended Play: A bonus "heat" can be awarded if drivers achieve a 4.9, 5.9, or 6.9 seconds race time.
Coinage can be set at 25¢ per play, 25¢ for 2 plays, or 50¢ per play.
Dimensions
Height: 63.75", 162 cm; Width: 36", 91.5 cm; Depth: 29", 73.7 cm.

Embargo

Embargo is a sea-battle game. It was the first original game from Cinematronics. It was created by Rob Shaver, a Cinematronic technician who left the game industry shortly after Embargo to work for Motorola as a software engineer. His game was clever, simple, and most important, it made money for Cinematronic.

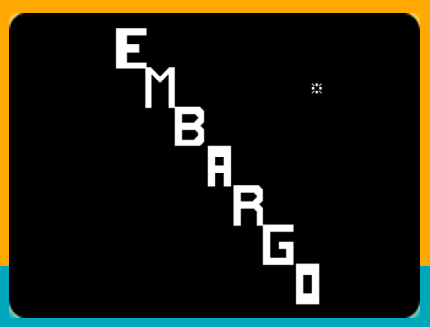
"Encyclopedia of Video Games: L - Z., Volum 2"

excerpt from the flyer:

Explosive Strategy on the High Seas!
Match Your Skills Against Human Opponents or the COMPUTER!

- Upright and Cocktail Table Models
- Realistic Sounds of Combat on the High Seas
- Realistic Ship Movement with Complete Freedom of Turns
- A Mine-Gap Button to Plan Escape Routes
- Number of Rounds per Game Adjustable
- 23" Solid State Monitor in Upright Model
- 19" Solid State Monitor in Cocktail Table Model

Manufacturer *Cinematronics*
Release *1977*
Genre *Action*
Cabinet Styles *Upright*
Cocktail



Fisco 400

Fisco 400 is a color racing game by Taito. The game is a clone of the Atari game, Sprint. Another game, also by Taito, was named Cisco 400. This may be a completely different game, or the same game with just a different title. Or completly nonexistent.

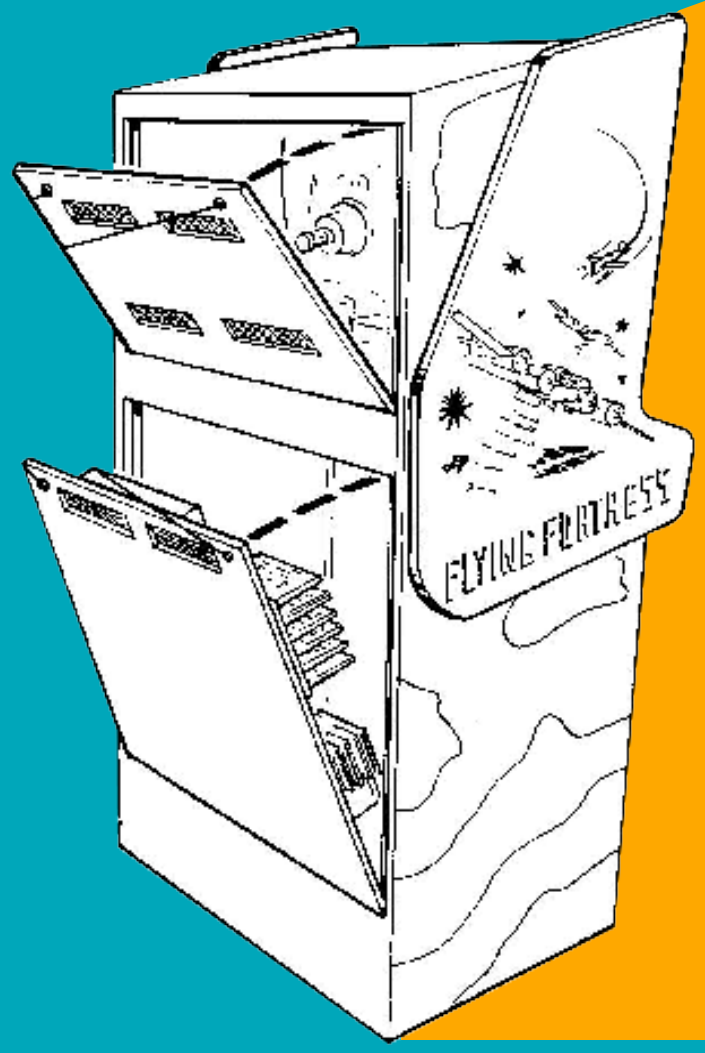
excerpt from the flyer:

- One, two, three, or four player driving game. Up to four players in four different colored cars can race with each other, while any unselected cars are computer driven.
- Player may choose one of three different tracks to begin the race, then as the game progresses slight alterations to the course will appear automatically.
- Animated starter with flag appears on the starting line and when the flag turns green the game begins.
- As player successfully drives around the course his score is displayed in the same color numerals as his car. The score of the player who has the most points will be flashing on and off.

Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *4 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Steering: *Wheel*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Flying Fortress

Manufacturer *Electra*
Release *1976/1977*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Buttons: *1 [Drop Bomb]*
Joystick: *2-way (up, down) with button [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Flying Fortress is a black and white B-17 Bomber simulation from Electra.

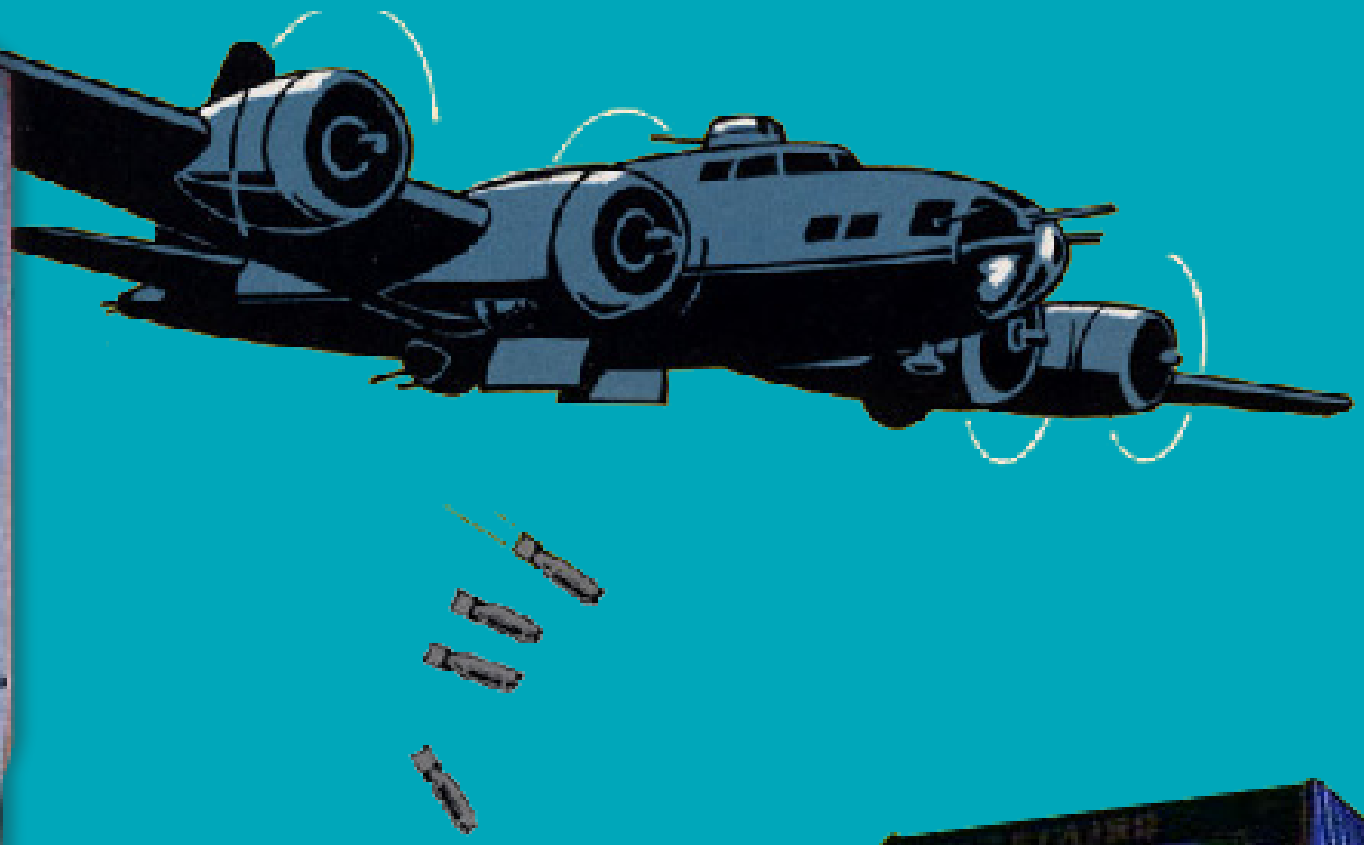
Players must score as many points as possible in the allotted 90 seconds. Shoot or bomb enemy planes, and bomb buildings. As the game progresses, the B-17 traverses the screen from right to left, across the red zone (20 points per item shot or bombed), then the white zone (40 points), and finally the blue zone (80 points). If the plane is hit by enemy fire, runs into an enemy plane, or crashes into a building, another appears at the very right of the screen again, starting off in the low scoring section. There is no limit to the number of B-17's in a given game. If the score reaches a value (default is 1400) in the 90 seconds allocated, an additional 30 seconds is awarded.

The cabinet has woodgrain sides and front. The artwork on the plastic monitor bezel shows various instruments and controls from the B-17.

"arcade-museum.com"

excerpt from the operator's manual:

Flying Fortress is a completely solid state video game which utilizes state-of-the-art semiconductor components. The game display and logic sequences are generated by two printed circuit boards. A 23-inch Motorola video monitor displays the game picture, and a unique sound simulator adds realistic sounds to complete the enviroment. All game sub-assemblies are accessable through two removable doors on the back of the cabinet.



Taito Version

Flying Fortress by Tatio is thought to be a license of Electra Games Flying Fortress.

Flying Fortress II

Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Buttons: *1 [Drop Bomb]*
Joystick: *2-way (up, down) with button [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Flying Fortress II is a black and white B-17 Bomber simulation with more variations.

Flying Shark

Manufacturer *Model Racing*
Release *1977*
Class *Wide Release*
Genre *Scrolling Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Steering:
X Yoke with two buttons [Fire]
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Flying Shark is a vertical scrolling air battle game where the player controls a biplane and battles enemy biplanes in the sky.

The Great White Buffalo Hunt

Manufacturer *Amutech, LTD.*
Release *1977*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

Great White Buffalo Hunt is an old west shooting game for one or two players. The players have an unlimited number of shots during the game playing time. The game features moving as well as stationary targets. Moving targets are rabbits, birds, and the Great White Buffalo. Stationary targets are bears and squirrels. Scoring is based on the difficulty of the target to hit.

Squirrels	10 pts.
Bears	20 pts.
Birds	30 pts.
Rabbit	40 pts.
Buffalo	50 pts.

excerpt from the operator's manual:

Game Tree is a completely solid state video game which utilizes state of the art semiconductor components. The game display and logic sequences are generated by three printed circuit boards. A 23 inch video monitor displays the game picture, and an advanced sounds generation system adds realistic sounds to complete the environment.

Game Tree is a game for one player, who controls a realistic hunting rifle. Points are scored by shooting the target animals, while successfully avoiding the hunting dog.

Game Tree utilizes PSE's high speed processing technique. The game is programmable, that is, all game functions are controlled through a central processing section. The system operates in a similar manner as a microprocessor chip.

excerpt from the flyer:

Turkeys trot, Rabbits hop... Squirrels jump from three to three. Be sure to miss the Hound Dog! He belongs to me.

Animals appear randomly in a realistic outdoor woods setting.

Experience the true sights and sounds.

NEW one step front service door especially designed by PSE.

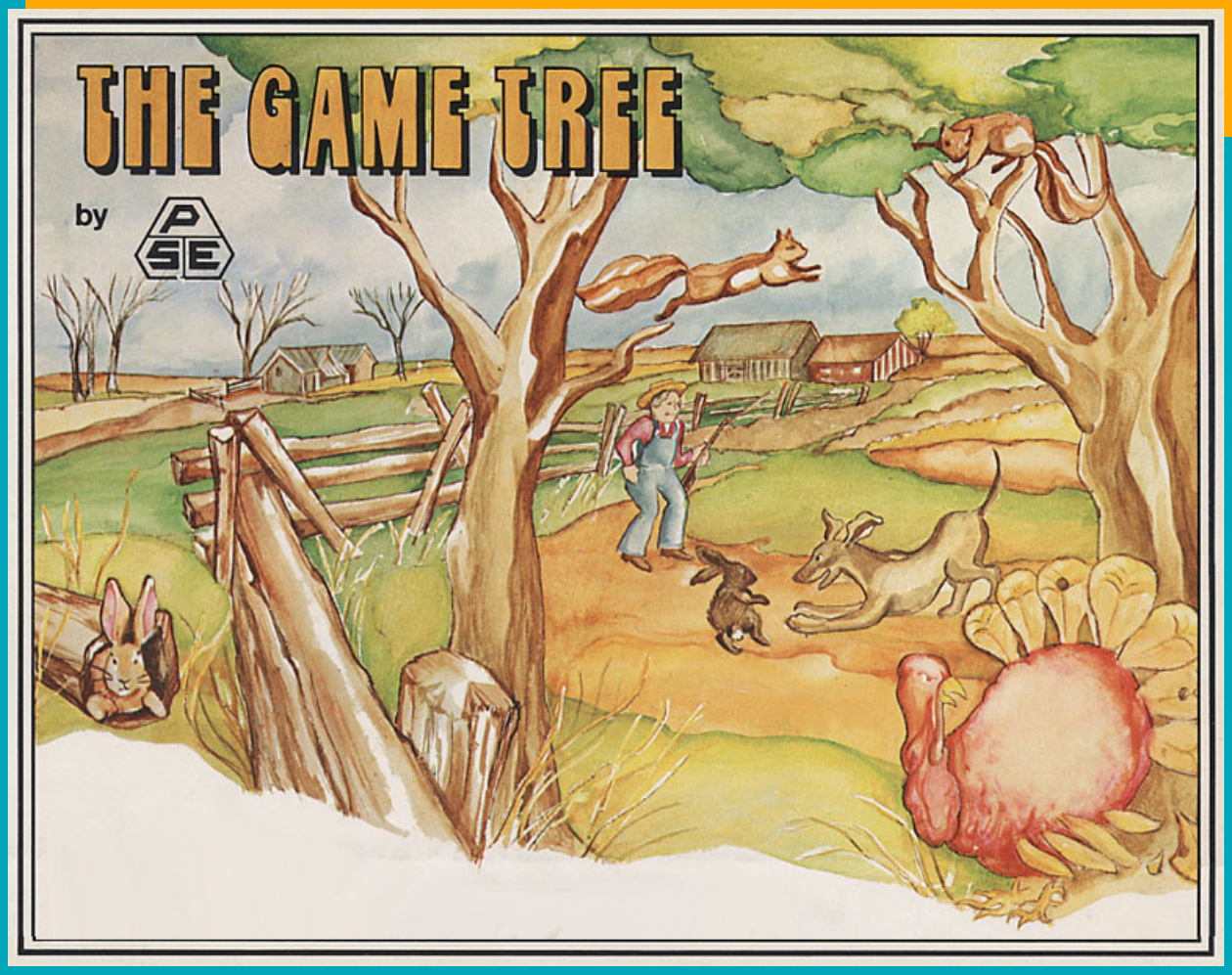
Slide out platform with adjustable glides.

23" solid state monitor

Heavy duty steel based rifle.

Backed by PSE's proven reliability. Featuring highly improved after sales service.

Order your Game Tree NOW and watch it gobble up quarters.



Manufacturer *Project Support Engineering*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Buttons: *2 [Shoot/Supercharge|Bomb]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Gridiron

Manufacturer *Meadows*
Release *1977*
Class *Wide Release*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Trackball: *Optical*
Buttons: *1 [Pass]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

“THE GAME FOR ALL SEASONS”

• One or Two Players
Play against your friend or the “Head Coach”
• Running, Passing, Kicking
All the action of real football including Field Goals!
• Eight Plays to Choose From
Twice the action of the competition
• Trak Ball Controls
Direct on-screen response to hand action
• Coin Accumulator
Players can extend present game up to 99 minutes!

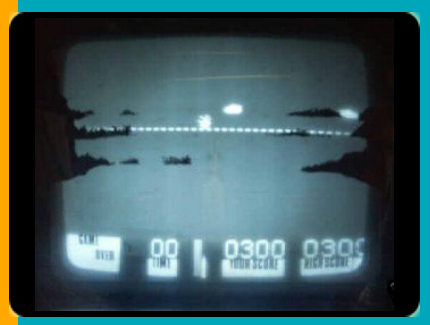
Gunman

Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *8-way*
Joystick: *8-way with button [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Gunman is an arcade shooter released in 1977. The game is a licensed version of Midways Boot Hill. The game was released by Taito in Japan.

Guided Missile

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player Ambidextrous*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Launch]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *No Audio*
Cabinet Styles *Upright*



Guided Missile, also known as Missile-X, is a fixed shooter arcade game released by Midway Games in 1977 and licensed to Taito Corporation for Japanese manufacture and distribution; it utilizes an Intel 8080 microprocessor (running at 1.9968 MHz), and the players must use a button to launch missiles at various targets that are moving across the screen. Once a missile has reached the top of the screen, it will start descending - and players will have to push the 2-way joystick left (and right) to aim it towards the targets. As with many other early Midway games the gameplay is time-based as opposed to life-based; and it will also get extended if players manage to score a certain amount of points before the timer runs out. The Taito Corporation version of this title also has a different score display.

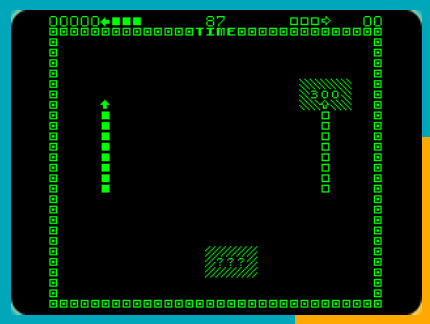
"strategywiki.org"

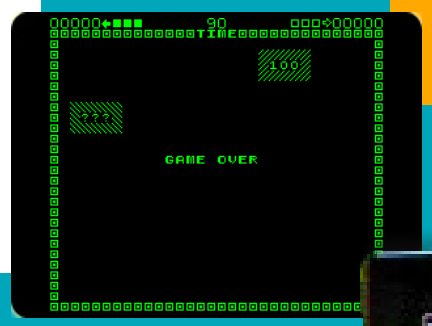
Guided Missile plays like an updated video version of some of the older EM (Electrical Mechanical) games like Sega's Combat and Midway's Invaders from Outer Space. Guided Missile use a half silvered mirror that allows players to see a painted background through it while it reflects the moving video image from below allowing the two images to combine in a sort of 3D effect. Midway did this on a few of their early games like Boot Hill, Blue Shark and Space Invaders. The game came in an upright cabinet and is a 1 or 2 player game. In a single player game only the right missile fires. Players do not play against a game controlled opponent. In a 2 player game players compete against each other to see who can get the highest score. Each player has a joystick with a fire button on top. The operator can set the play time and at what score the extended play kicks in. The play time can be 60, 70, 80 or 90 seconds and extended play can be set at 500, 700, 1000 or 1300.

"blinddog@retroist.com"

Hustle

Manufacturer *UPL*
Release *1977*
Class *Wide Release*
Genre *Skill*
Hardware *Sega Blockade hardware*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *4-way (up, down, left, right)*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Hustle is a 1977 arcade game released by Sega/Gremlin on Sega Blockade hardware that is effectively the first version of Snake, except that the normal pellets are replaced with larger pieces containing various point values that players get if they touch the piece before it disappears.

Players directs a snake-like object moving around the play field. Each game lasts for 90 seconds. Periodically, targets will appear with a point value. Players must aim for the target while avoiding the opponent's tail - and their own.

One or two players can play simultaneously. Players also have three options pertaining to their targets - a normal game where target values don't change, a countdown where the value slowly falls, and a count up where values slowly climb and delaying can increase the score. There are also three skill levels that alter the speed of the game and the intelligence of the computer player.

Crashing into the walls or the players own tail will give the opponent a 400 point bonus. Any targets on screen will also be awarded to the opponent. As play progresses, the tail grows longer, making it harder to avoid. Some targets display question marks instead of point values. These are random points, and there is a chance they will be awarded to the opponent instead of the player, so they aren't always worth pursuing.

"mobygames.com"

Taito Version

Gremlin Version

excerpt from the flyer:

A winning new game concept from Gremlin

HUSTLE is a fascinating new video game of fast action, strategy and surprise. Its unique combination of offensive and defensive action puts HUSTLE leaps and bounds ahead of conventional video games.

While it's fantastic for two players, HUSTLE is clearly the greatest single-player video game ever created! Speed, sound and surprises build to a frenzy that leaves players panting for more. HUSTLE's replay option and continuous score readout add to the excitement.

Game Action

Steer your arrow with four directional buttons into the 100-to-900 points targets that appear and disappear at random.

If you hit your opponent's arrow-tail, your own tail or the screen's outer margin, you lose 400 points. Also, all the targets showing on the screen are awarded to your opponent, or - if you're playing alone - are subtracted from your score.

Gremlin takes the gamble out of games for you

Gremlin is one of the world's leaders in wall and video games because we build success into every game idea and every machine.

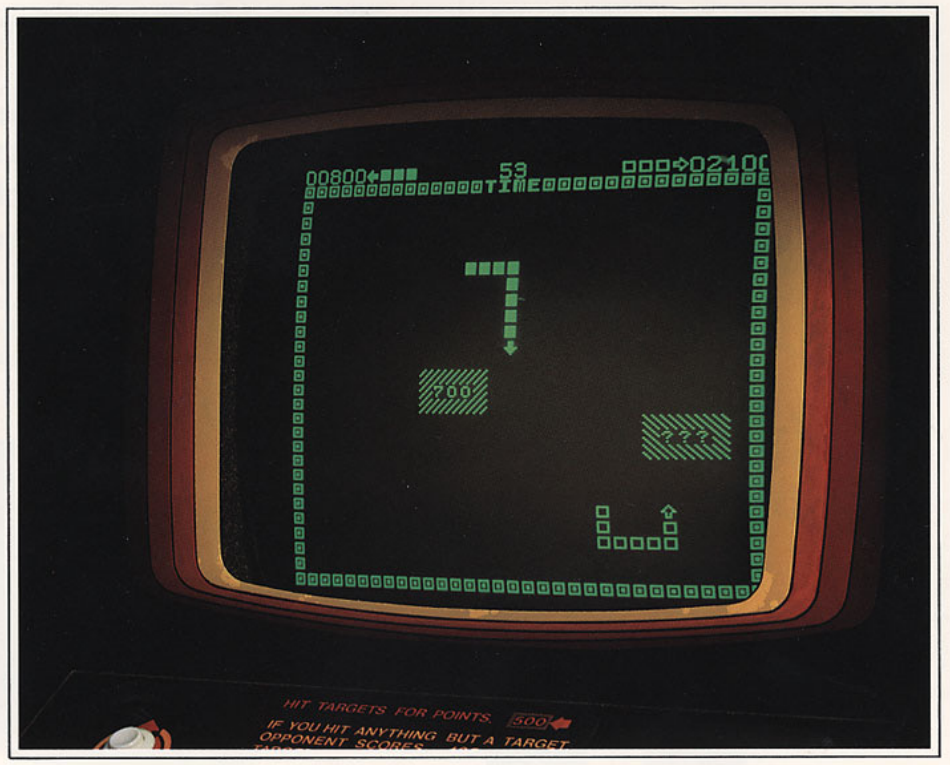
First, being the industry innovator puts Gremlin ahead of the game right from the start. We carefully *pre-test* each new game with actual game players to assure popularity and profitability before we offer it to you. That's one reason Gremlin games are the most imitated games.

Second, Gremlin's state-of-the-art technology, common-sense engineering and rigid quality control assure you of the highest standards of reliable performance.

We built in the features

- Rugged, 19" Motorola TV Monitor.
- Anti-cheat coin mechanism.
- E-Z adjust control panel inside coin door to set volume.
- Set free game to 11, 13, 15 or 17 thousand.
- Gremlin's Surround-A-Sound.

Introducing Hustle: Gremlin's great new video game that turns first-time players into steady payers in 90 seconds.



Laguna Racer

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Racing*
Hardware *Midway 8080*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
- **Steering:** *Wheel*
- **Shifter:** *2-position (low, high)*
- **Pedals:** *1 [Accelerate]*

Monitor
- **Orientation:** *Vertical*
- **Type: Raster:** *Standard Resolution*
- **CRT:** *Black and White*

Sound *No Audio*
Cabinet Styles *Upright*

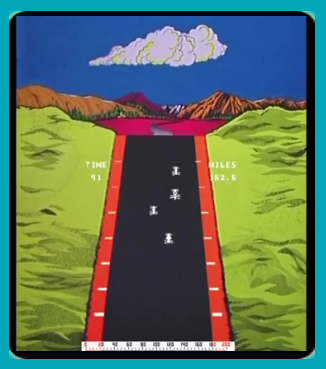
Laguna Racer is a racing arcade game, which was released by Midway Games in 1977; it utilizes an Intel 8080 microprocessor (running at 1.9968 MHz), and the player must use a steering wheel to take up control of a car (with a single pedal to make it accelerate and a gear shifter to switch between low and high gear). The score is measured in "miles" (players will get 000.1 point for every metre travelled), and as with many other early Midway games, the gameplay is time-based as opposed to life-based - and it'll get extended, if players manage to score a certain amount of points before the timer has run out. Players also have to watch out for CPU-controlled cars upon the track; if they crash into one, their speed (indicated at the bottom of the screen, like in Midnite Racer) will be reduced to 0 mph, and they'll have to shift the car back into low gear to regain their lost speed before shifting into high gear again.

"strategywiki.org"

excerpt from the flyer:

A fast action driving game that pits the drivers skill against a computer

- 3 dimensional driving game with gear shift control
- High score, low score and driver rating
- Realistic engine, acceleration, and crashing sound effects
- Adjustment switches for coinage, timing, and extended play
- Midway micro-processor logic boards
- 23" solid state T.V. monitor
- Built in RAM and ROM tester
- Double 25¢ coin chutes
- Size: 26 1/2" (67.31 cm) wide
  38" (96.52 cm) deep
  67" (170.18 cm) high



M-4

M-4 is a versus shooter arcade game that was released by Midway Games in 1977; it utilizes an Intel 8080 micro-processor (running at 1.9968 MHz), and both players must use a vertical 2-way joystick to take up control of a tank on their side of the screen (if only one player is present, that tank on that left side of the screen will be controlled by the CPU) with a single button to make it fire shots at the white barrier in front of it and wear it away. When one of the tanks fires a shot at the other one and hits it it will explode, and the firing player will receive a random amount of points - and as with Gun Fight and Boot Hill, the other tank will then get resurrected as the players game continues. As with several other early Midway games, the gameplay's time-based (as opposed to life-based), but there's no extended play; it is also worth noting that this title was developed by the company "Arcade Engineering" for Midway.

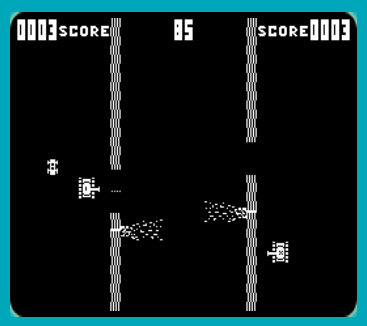
"strategywiki.org"

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

Midway's M-4 Combat Strategy Game

- 1 or 2 player game
- Featuring tanks, jeeps, planes
- Realistic battle sounds
- Target score 1 - 30 points
- Micro-processor logic system
- 23" solid state monitor
- Adjustable timer and extended play
- Built-in RAM and ROM tester
- Variable coinage
- Double 25¢ coin chuter
- Size 65-1/2" (166.2 cm) Height
  26-1/2" (67.3 cm) Width
  33-3/4" (85.4 cm) Depth



M-79 Ambush

Manufacturer *Ramtek*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Upright*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Gameplay consists of various “targets” (tanks, jeeps, etc.) moving left-to-right (and right-to-left) across the screen. The trick is to correctly time the fire from the M-79 grenade launcher (otherwise known as a “bloop gun”) to hit the targets. The shots take some time to hit the target, as they follow a long, arcing trajectory, much like firing a real bloop gun.

M-79 Ambush was the first video game to use a Micro Processor (Intel 8080) to control the game. It was probably the first game to use a true memory-based raster scan display.

The previous non Micro-Processor games were what was called “strokers” - in other words the CRT beam was moved (stroked) in a pattern to render the game action. M-79 had a small raster memory and scanned the crt just as a TV does today. It was all new technology for games to render live action on the screen with a raster display.

Ramtek was the first to develop raster scan Micro Processor control display systems and used that basic concept in this game.

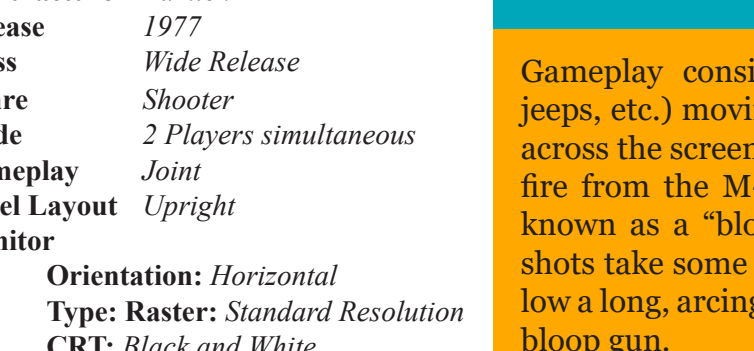
“arcade-museum.com”

excerpt from the flyer:

M-79 is the new exciting game from Ramtek that virtually compels people to play it. And two players means double profits for every game. At 50¢ a play that can add up fast!

This is a shooting game where tanks, jeeps and motorcycles battle it out in front of the two cannons under U.N. observations.

Bang! When the enemy is hit, an explosion sequence occurs complete with the sounds of gunfire, whistles and whines - the action goes on and on!



Man T.T.

Manufacturer *Sega*
Release *1977*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

SEGA MAN TT
セガ・マン・ティー・ティ

Man T.T., not to be confused with the later Manx TT, is a discrete logic arcade video game released by Sega in 1977. The game is most likely a rebranded version of the 1976 Fonz arcade machine. Sadly the game is exceedingly rare and not emulated. This means beyond a picture of it in a Japanese old flyer, not much is known about the game. The flyer says it was a timed game where it extra time would be awarded every 1000 points.

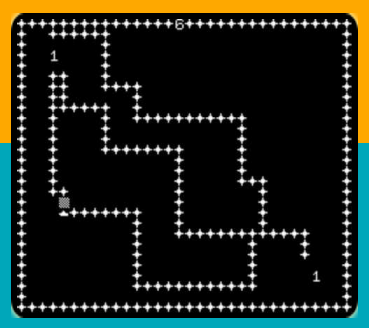
Assuming the game is a rebrand of the SEGA 1976 Fonz cabinet (which it seems to be), then the game would have involved racing a bike and trying to go as fast and far as possible in the time allowed (45 seconds to 100 seconds, set by the operator).

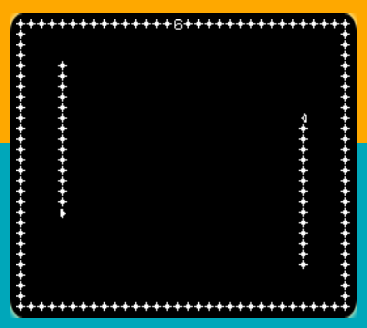
"TheDrisk@jammaplus.co.uk"

Minesweeper is Amutech's version of Sega/Gremlin's Blockade released in 1977; the legitimacy of its release is unknown. Both 2-player and 4-player versions were made. The only immediately noticeable differences between these and the originals are the graphics, how to start the game (insert one coin for 2-player or two for 4-player if that option is available, then wait several seconds), and the starting positions of the players.

excerpt from the flyer:

Minesweeper puts you into the action. Players get the feeling that they are actually navigating their ships through the water, leaving their mines behind them, hoping to entrap the enemy so their ship will explode upon hitting a mine. Utilizing the player option of pro or novice, the excitement grows with each new formation of the mines, thus involving the players in a mind competition utilizing the display that is provided by Minesweeper.





Mine Sweeper

Manufacturer *Amutech, LTD.*
Release *1977*
Genre *Shooter*
Cabinet Styles *Upright*
Cocktail

Meadows Lanes

Manufacturer *Meadows Games*
Release *1977*
Class *Wide Release*
Genre *Sports*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *2 [Throw Fast|Throw Slow]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

excerpt from the manual:

MEADOWS LANES, a game of skill, is a video bowling game. The player must locate the “Bowler” inside the gutters and then bowl the ball either fast or slow. If the ball is not going exactly where the player wants it to he can hook the ball either to the right or to the left, but he can only hook the ball one time. The instructions are printed on the video screen and will provide the proper instructions for whatever options that the operator has selected.

The one player score is displayed on the left side of the monitor and the second player score is displayed on the right side. When a tow player game is finished the word “WINNER” is written under the player with the highest score. In case of a tie the word “TIE” is written across the bowling alley. The score displayed on the monitor is scored exactly the same way that real bowling is scored.

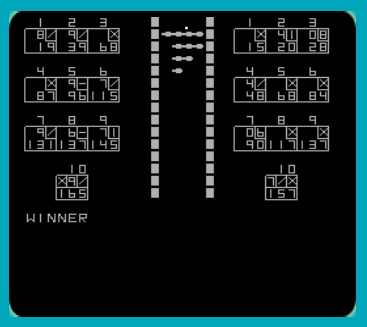
excerpt from the flyer:

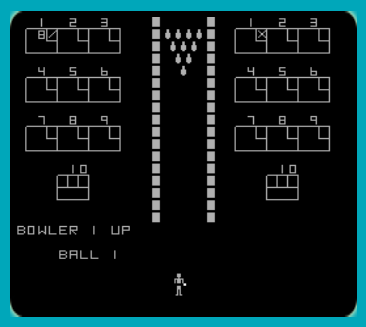
Finally... one of the worlds favorite indoor sports comes to the TV Screen.

Have you tried to get an open lane lately? You’ll wait in line to play Meadows Lanes... too!!

Try Meadows Lanes for all the realism, fun & excitement of that age old sport - Bowling.”

- Upright and cocktail models
- Move the bowler into position
- Bowl the ball - FAST or SLOW
- Hook the ball - LEFT or RIGHT
- Accurate score keeping for each player
- Realistic “bowling alley” sound effects
- 10 full frames per bowler
- Indestructible Pushbutton Control
- Microprocessor Logic





Night Racer

Manufacturer *Micronetics*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Pedals: *1 [Accelerate]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Deluxe

The idea for Night Racer came to designer Ted Michon while he was in Germany working for Digital Games investigating problems with their Air Combat game. In a bowling alley, he saw a game called "Nürburgring 1" (after the German racetrack) that was the first he ever saw that attempted a 3-D effect. The game was a one-of-a-kind piece and Michon eventually met the designer and found that the entire game had been designed with analog components. Michon urged the designer to create a digital verison but was igored so he decided to design his own version. Before the game was released, Digital Games was sold and reopened as Micronetics.

Night Racer was the only game they produced (released just before Midway's "Midnite Driver"/"280 Zzzap").

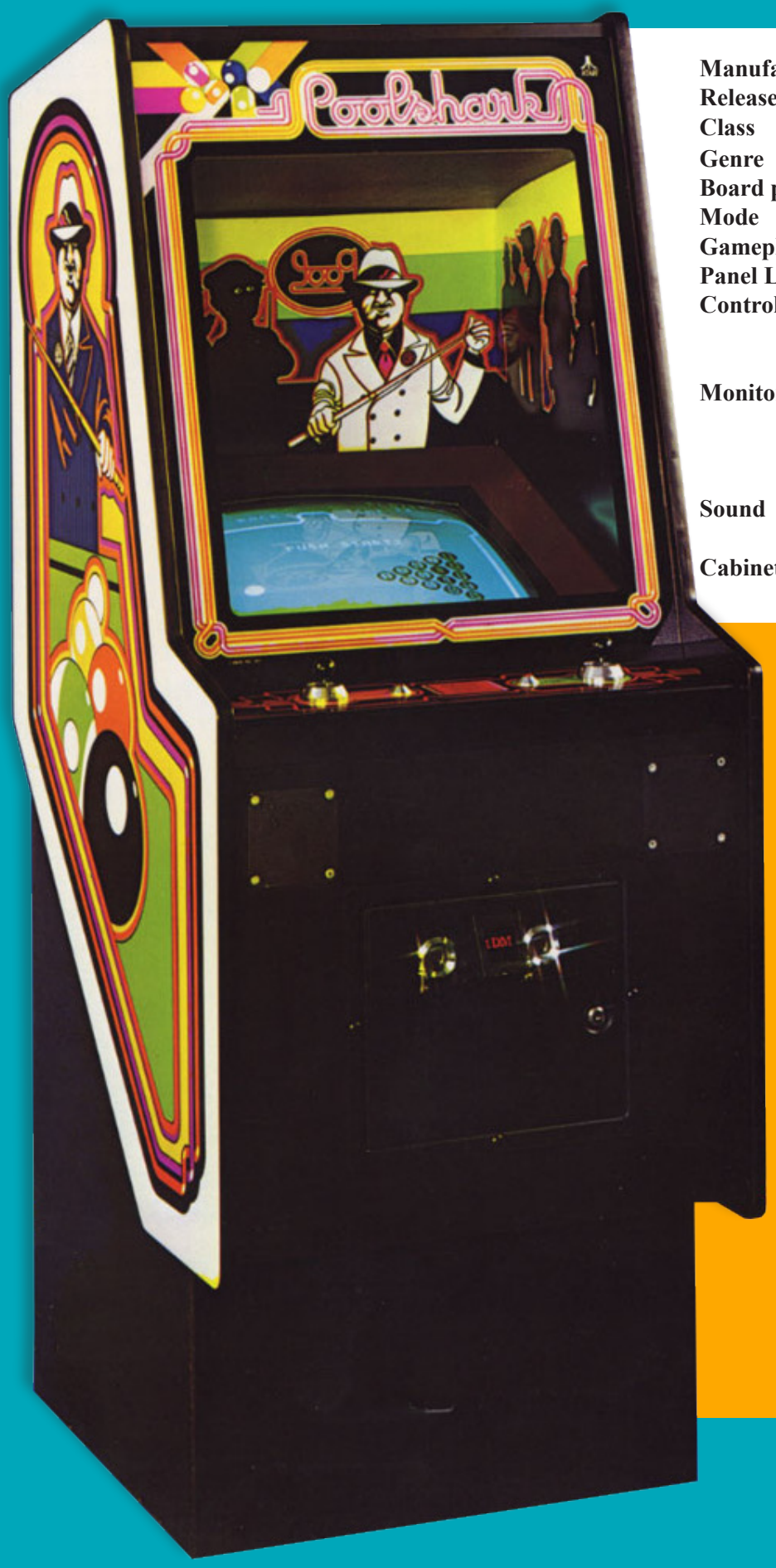
"Ted Michon@arcade-history.com"

excerpt from the flyer:

For the First Time electronic gives you the experience & real sensation of the champion drive.

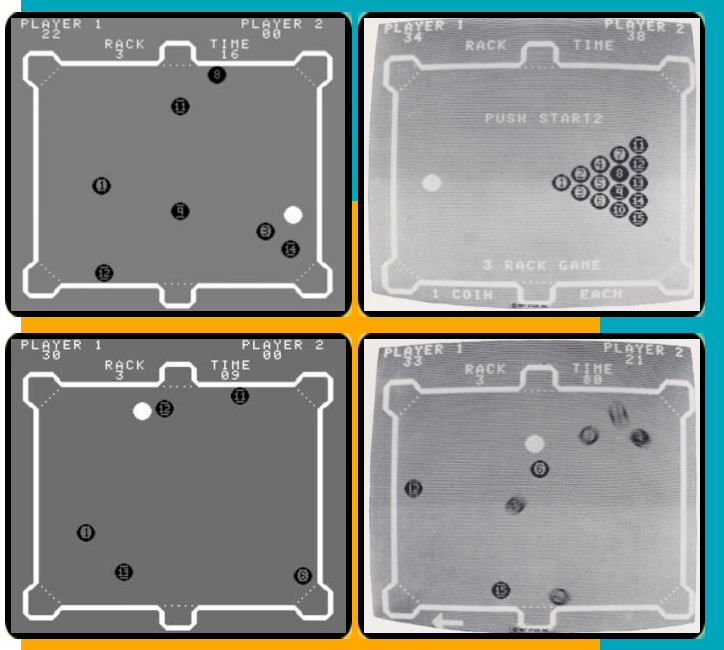
Night Racer brings your clients all the skill, sound, and fury of Le Mans, and the Indy "500"! Our impressive sounds plus out three dimensional curving video track and varying levels of challenge make Night Racer number one money maker in every location. Our rugged, carefully planned construction makes Night Racer virtually vandal-proof. Special digital dashboard plus feature after feature make Night Racer the newest and most exciting video game on the market today.

FEATURES:
• 3 Dimensional Racing Track
• Realistic Sounds
• 23" Solid State Monitor
• Switch Adjustable Extended Play
• Switch Adjustable Time Control
• Fully Responsive Steering
• Bonus Time Variable
• One Coin, Two Coin



Pool Shark

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Pool*
Board pin *Atari BW Raster*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Multiple Player*
Controls
Joystick: *Analog*
Buttons: *1 [Shoot]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Pool Shark is a billiard game from Atari. The analog joystick controls the position of the cue ball and players move the cue ball around ramming into the other balls trying to get them to drop into the pockets. It is a timed game so the quicker players can sink those balls the better. If they get the cue ball to close to the pockets they'll scratch and loose their turn.

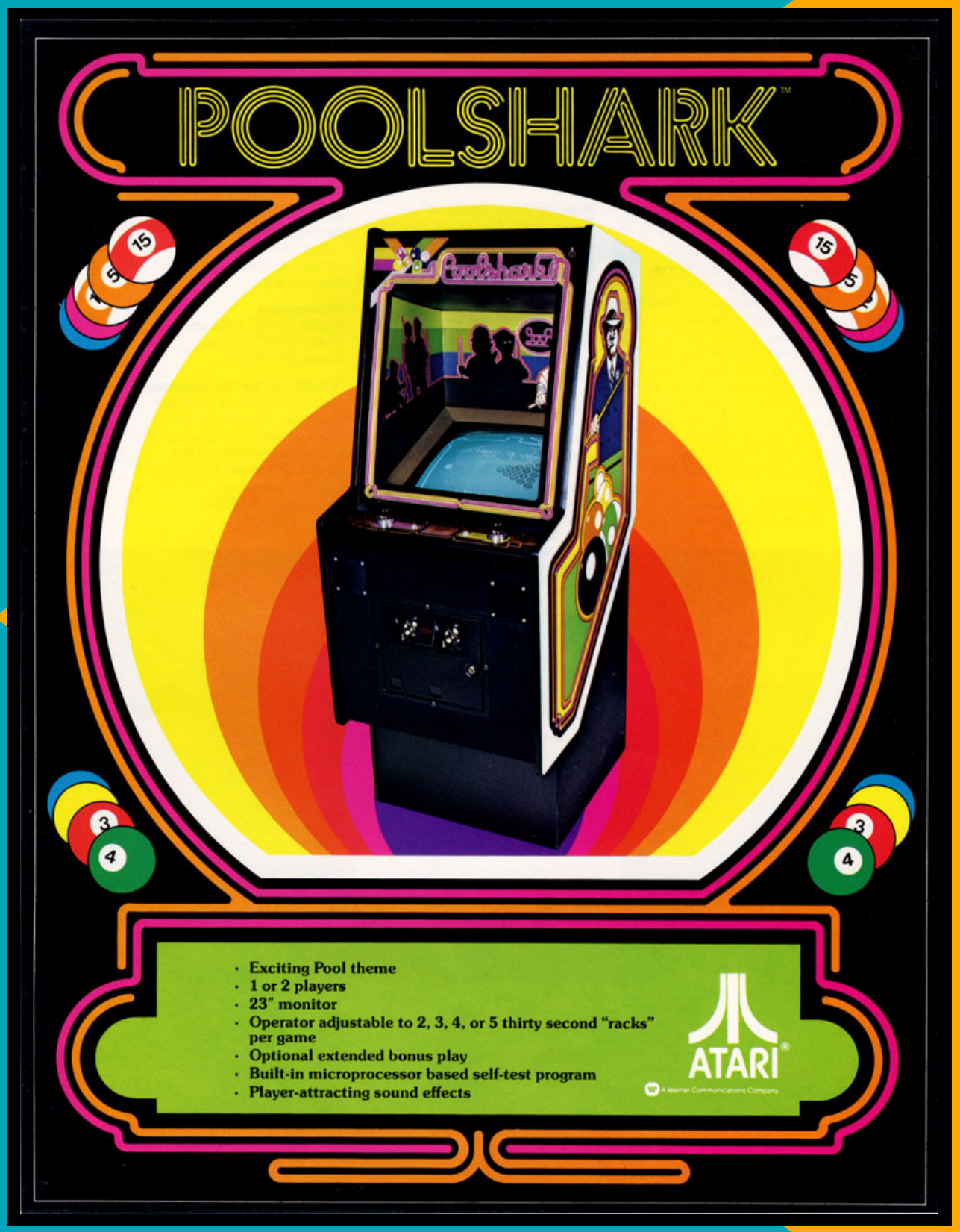
excerpt from the flyer:

Pool Shark.™ A whole new ball game.
A totally new concept in profit making excitement, Pool Shark brings the popular theme of pool to a highly competitive yet easy to play video game...

Number 8 in the side...
Replay is designed into the play action. The more it's played, the higher the potential score. Players can't resist coming back to improve their skill.

Each player gets 30 seconds to sink a "rack" of 15 balls. Players compete against each other and the clock to hit as many balls as possible into the "pockets" with the video cue ball without "scratching" and losing time. 1 point is awarded for each ball sunk.

Durable new joystick controls (PC board adjustable) move the cue ball continuously in any direction. Players can "chase" balls, use cushion and deflection shots as in real game.



New Operator Options Game Time: Can be adjusted to 2, 3, 4 or 5 30 second racks per game.

Extended Play: An extra rack setup with a 15 second time limit can be awarded if a player sinks all the balls within the standard 30 second game.

Coinage: Can be set at 1 or 2 coins per player. 1 coin per game (1 or 2 players) or 1 coin for 2 games (1 or 2 players).

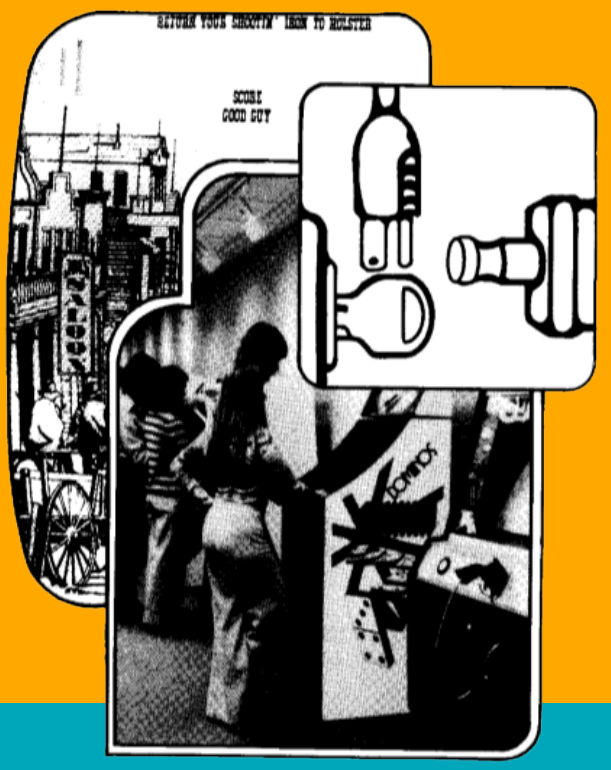
Exclusive Self-Test Program
The built-in program displays all microprocessor and memory functions including switches and game options for fast on-the-spot checking and troubleshooting.

Designed to earn in any location, and last!
Durastress™ tested, all solid state reliability, rugged construction and Instapart™ 24-hour parts turn-around means longer maximum earning potential.

And, as a bonus, Pool Shark comes with Atari's new trouble-free coin door.

Dimensions
Height: 62.25", 158.1 cm.
Width: 25.25", 64.1 cm.
Depth: 29", 73.7 cm

"Chalk up" for big earnings!
Get the details from your Atari Distributor. Play all new Pool Shark yourself! You won't be able to stop, and neither will the players.



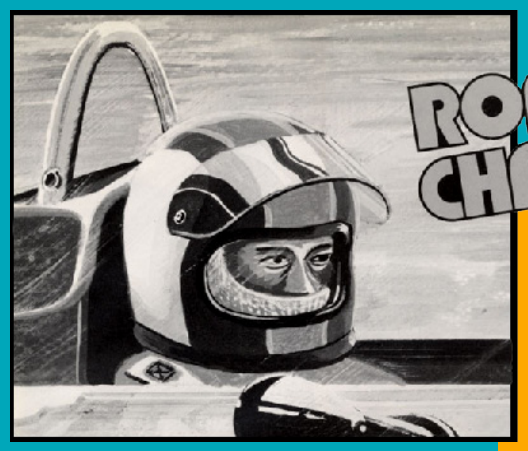
Road Champion

Manufacturer *Williams Electronics*
Release *1977*
Class *Wide Release*
Genre *Racing*
Board pin *Discrete Logic*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Pedals: *1*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Road Champion is a timed car racing game where players try to race ahead of the opposing cars and cross the finish line first to become the winner.

The game does not use a microprocessor, rather it uses 'Discrete' logic to build the cars, road and effects. It uses 4 boards and a couple of the PCBs have PROMs on them.

The game was later licensed a year later to Taito under the same name.



Road Champion

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Racing*
Board pin *Discrete Logic*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Pedals: *1*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

This Great Solid State Video Game is a Location Tested Winner that presents an Auto Race Game at its Best.

- Foot Acceleration, low then high gear combined with Driving Skill present competitive appeal seldom achieved.
- Player control of Track Speed is a strong feature.
- Auto Race and Crash Sounds with a continuous beep, beep on the final lap and a Special Victory Fanfare when the Player is the Champion creates tremendous play against appeal.
- Time and Sound Control is adjustable.
- Playing Time is extended when the Score reaches 400 points.

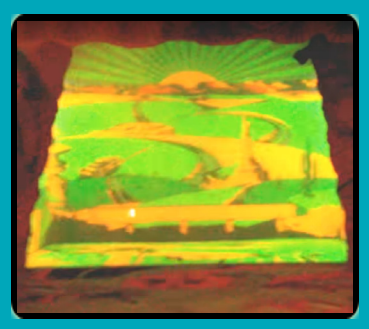
Road Runner

Manufacturer *Midway*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Road Runner (later changed to Desert Gun) is a first-person shooter arcade game. The reason for the name change is not like that of Midnite Racer to Datsun 280 Zzzap; when Midway merged with Bally, they had also released a game called "Road Runner" but may have been for the reason to avoid legal issues with Warner Bros. who had created a cartoon character called "The Road Runner" in 1948. That character would later go on to appear in an Atari arcade title, from 1985, also titled Road Runner. MAME lists this game as Desert Gun.

Road Runner utilizes an Intel 8080 microprocessor (running at 1.9968 MHz), and the player must use a lightgun (made up to look like a hunting rifle) with a trigger to shoot various animals (including road runners), for points. As with several other early Midway games, the gameplay is time-based, as opposed to life-based - and much like in Sea Wolf, the game will be extended if you manage to reach a preset amount of points before the game timer runs out.

"arcade-museum.com"



excerpt from the flyer:

Electronic Sound and Music

Your Score, Previous Score and High Score Displayed

Micro Processor Logic Boards

Full Size Rifle

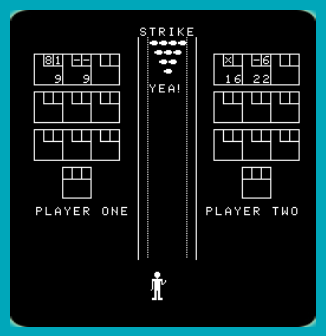
23" Solid State Monitor

Double 25¢ Coin Chutes

Multilingual

Robot Bowl

Manufacturer *Exidy*
Release *1977*
Class *Wide Release*
Genre *Sports*
Board pin *Robot Bowl Pinout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons:
3 [ThrowHook LeftHook Right]
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail



Robot Bowl is the first Bowling arcade video game. The only other bowling games released as early as 1977 are the RCA Studio II version, and Meadows Lanes an almost exact copy of Robot Bowl. Apparently Meadow Games copied Exidy and not the contrary (though Meadows Lanes is even more crude graphically than Meadows Lanes).

To play the game (1 or 2 players), players have to move the bowler into position, bowl the ball fast or slow, and then hook the ball left or right.

In opposition to most other early Bowling games released later, players place their bowler where they want. This tend to make the game easy, with strikes being fairly easy to achieve. Other games usually move automatically the bowler (or ball) continuously from left to right, challenging the player to throw the ball at the right moment.

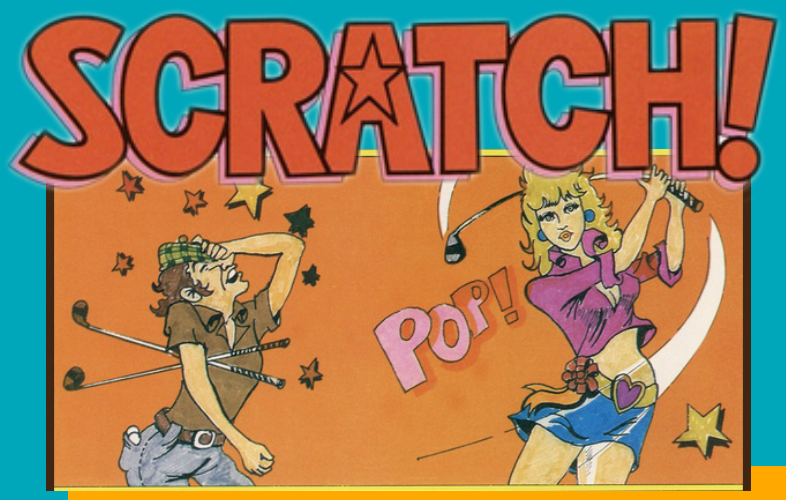
"old-computers.com"

Perhaps most importantly, Robot Bowl had a feature that previous Exidy games had lacked – a microprocessor. At the time, the use of microprocessors in video games was still somewhat innovative and Exidy's designers were unsure that they would work. To prove it, Howell Ivy had to purchase a MOS Technologies 6502 himself. Ivy had been masterful when it came to creating hardware-based, TTL games, often creating new game variants (such as the unreleased Spiders From Space) within a few weeks or even days of starting. With the rise of the microprocessor, however, game design began to change from a hardware to a software-oriented process.

Robot Bowl also featured an interesting cabinet design, though the innovation was a result of necessity being the mother of invention

Michael Cooper-Hart; *Howell had come up with Robot Bowl which was a fun game to do. It had a beer frame in it where the waitress comes across with a beer on a tray. We needed to get into production quickly. We had bought a company called Fun Games and they had a bunch of inventory over in Oakland. They had these cabinets, which cost us maybe a third of what we would normally pay. The problem was they were for a driving game and they had a hole in the middle of the front panel for a gas pedal with no pedal in it. So I brought this cabinet back over, I think there were 300 of them over there. I set it down and said to Hal "Why don't we make the hole the ball return". So we just silk-screened above the hole "Ball Return" and we were in production a week later.*

"allincolorforaquarter.blogspot.no"



Scratch

Manufacturer *Universal*
Release *1977*
Class *Wide Release*
Genre *Breakout*
Cabinet Styles *Upright*
Cocktail

Scratch was produced by Universal in 1977. The game is a version of Atari Breakout and came in both an upright and a cocktail cabinet.

Score

Manufacturer *Exidy*
Release *1977*
Class *Wide Release*
Genre *Action*
Hardware *Exidy Discrete Logic*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *8-way*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Score was referred to as “The Love Machine”. Oddly, the game was actually another extension of the Destruction Derby concept with the cars replaced by bar patrons. Set in a singles bar, the object of the game was to “score” with as many members of the opposite sex as possible. When the onscreen Lothario made contact with the object of his (or her) affections, a heart appeared on screen. A cocktail version of the game came in a heart-shaped cabinet. Exidy also built an optional dispenser that could be attached to the game giving tokens in response to high “score”s. Despite the innovative concept, amorous bar patrons understandably preferred the real thing and the game failed gain interest.

“allincolorforaquarter.blogspot.no”

R-R-Roaring action for big game players.

SAFARI

Safari

Manufacturer *Sega/Gremlin*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Sega Vic-Dual*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up, down, left, right)*
Joystick: *Special [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Safari is an arcade game released by Gremlin Industries (in 1977); players use two four-directional joysticks to move a hunter around the screen and make him shoot at animals with his rifle. In each round, players will have ninety seconds to make the hunter shoot the different types of animals as they approach him in order to score points before they get him - snakes and lions are worth 100 points, wild boars are worth 200 points, and vultures are worth 300 points. If an animal should get the hunter, he will have to go to the "hut" (the white vertical line in the centre of the screen) in order to recover, and lose time for it. When the score reaches 2000, 4000, 6000, and 8000, animals start moving faster. It's also worth noting that if players have managed to amass a score of over 3000 points at the end of the game, it will result in 30 further seconds of extended play.

"strategywiki.org"

excerpt from the flyer:

Gremlin's newest video game clears the path to profits!

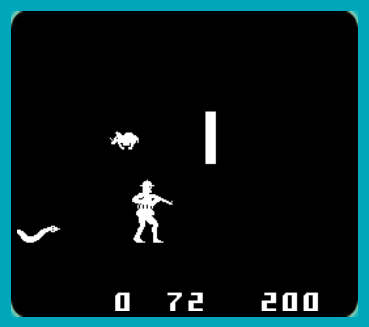
Ready
It's a ONE-PLAYER battle against the jungle. A hunter has 90 seconds to stalk and shoot four different kinds of wild animals. The more often he hit his prey, the higher the score. And the *animals* are out to get the *hunter*.

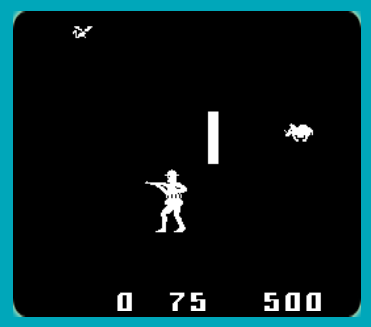
Aim
The player operates two controls. One moves the hunter in the field; up, down, right and left. The other aims and fires the gun.

Fire
Hit a snake or a lion for 100 points, a 200-point boar or a 300-point vulture. But be careful! If an animal strikes the hunter, he falls. And there's a time-lost penalty in returning the hunter to the safety of his hut. The animals move faster and faster until the hunt comes to a furious finish.

R-R-Real jungle sounds.
Gremlin's famous audio engineering has recreated the jungle and its wild creatures with sound-sensations.

Other Features:
19" solid state TV monitor
Power: AC, 110V-115V-230V, 50/60 Hz, 130 watts. 3-wire cord with safety interlock on game access door. Grounding required.
Weight: 187 lbs. (86 kg)
Solid state circuitry for dependable operation.





SAFARI

Safari

Manufacturer	*Taito*
Release	*1977*
Class	*Wide Release*
Genre	*Shooter*
Mode	*1 Player*
Gameplay	*Single*
Panel Layout	*Single Player*
Monitor	
	Orientation: *Horizontal*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

Safari is a licensed version by Taito Corporation released for Japanese manufacture and distribution. As with Hustle, when this game was licensed to Taito Corporation, it was released as part of their third “Taitronics T.V.” series.

The Taito version has birds, lions, deer, and buffalo as the animals while the Gremlin version has snakes, lions, boars, and vultures.

excerpt from the flyer:

How To Play

- Insert coin(s), animated hunter appear in the hut.
- By using the hand grip control, the hunter can be moved up or down, right or left on the TV screen. Targets are shot by pulling the trigger on this control.
- To adjust the angle of the rifle, use the short lever.
- Target animals are birds(300 points), lions(200 points), deer(100 points) and buffalos(100 points) which appear at random on the screen and move right to left or left to right.
- While the hunter is outside the hut he must be careful to avoid the moving animals. If hit he is knock down and penalized time and reset into the hut.
- Play time is 90 seconds but extended time is swarded after score reaches 3000 points.

Features

- As score reaches 2000, 4000, 6000 & 8000 targets move faster and faster.
- Hunter can be moved anywhere on screen.
- Previous High Score feature keeps the days high score on display for all to challenge.
- Solid state circuitry for dependable trouble free operation.
- Authentic sounds of gunshots and screams of animals as they are hit.

Specifications

Height	65” (1640 mm)
Width	26” (650 mm)
Depth	31” (790 mm)
Weight	187 lbs (85 kg)
Power	195 W

Space Wars

Manufacturer *Cinematronics*
Release *1977*
Class *Wide Release*
Genre *Space*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3 [Thrust|Fire|Hyperspace]*
10-digit keypad
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

Space Wars is a 1977 vector graphics arcade game based on the 1962 PDP-1 program Spacewar!. It was ported to the Vectrex in 1982.

Space Wars was the brainchild of Larry Rosenthal, an MIT graduate who was fascinated with the original Spacewar!. Later he builds his own version around a vector display, installing the game in an arcade near the Berkley campus. Differing from the current raster graphics monitors of the day, a vector graphics game draws sharp, high-contrast shapes on the screen using straight lines. Rosenthal shops the system to numerous manufacturers while demanding an unheard of 50 percent take in the game's profits. He calls upon companies such as Atari, who blow him off with Bushnell possibly still stinging from the failure of his own Spacewar! translation, Computer Space. The PONG clone manufacturer, Cinematronics, snaps it up. In a move they would regret later, their agreement with Rosenthal allows him to retain ownership of the technology.

In the game, two players controlled different ships. One button rotated the ship left, another rotated the ship right, one engaged thrust, one fired a shell, and one entered hyperspace (which causes the ship to disappear and reappear elsewhere on the playfield at random).

The game offered a number of gameplay options, including the presence or absence of a star in the middle of the playfield (which exerted a positive or negative gravitational pull), whether the edges of the playfield "wrapped around" to their opposite sides, and whether shells bounced. Three other fascinating

features were unique to this game. First, the game could not be played in “one player” mode; a human opponent was required. Second, the player’s ship could take a glancing hit without dying, but would suffer damage; a cloud of loose ship fragments would break off and float away, after which the ship would be visibly damaged on screen and would turn and accelerate more slowly. Third and most memorable was that the duration of play for any contest was solely governed by the amount of money deposited; each quarter bought a minute and a half of play. A dollar bought six minutes, and for a ten dollar roll of quarters two players could play non-stop for an hour.

With the market matured since Bushnell’s Computer Space failure, Space Wars is a big hit for Cinematronics, selling 30,000 units and staying in the top 10 money earning arcade games for three years.

It was quickly imitated by Atari (Orbit, 1978 raster).

“thedoteaters.com”

The Cinematronic upright cabinets have two lighted marquees one on the top of the game and one below the monitor and above the control panel white text on a black background with red trim. Lots of text for instructions. The side art was simply a blue vertical strip that said SPACE WARS.

The Taito Space Wars, released a year later, looks like a licensed version of Cinematronics Space Wars. Not much information was found on this release, other than a flyer and a brief description of gameplay (which sounds the same).

excerpt from the manual:

Generally speaking, your Space Wars game is designed much the same as conventional video games. The only major exception to this is the fact that the Space Wars game is provided with an alternate means of visual display: the patented Vectorbeam™ monitoring system.

The game is, however, built of the same basic building blocks as any other video game.

The Central Processing Unit, contains circuitry to strobe and interpret all input functions including the player control panel switches and all coin and credit information and to create all the digital signals used in providing the visual display. It also contains all the software (i.e., machine language and game personality memory) needed to control the game operation and to generate the proper vectors needed to display.

In fact, the CPU logic board contains a great portion of the vector generating system, which also includes the display unit. The CPU logic board also controls the switching (electrically) of the audio printed circuit board.

Taito Version (1978)

Cinematronics/Vectorbeam Version (1978)

The Audio Board, as in many other video games, is comprised of a noise generator and the associated wave shaping circuits as well as a number of amplifiers. The various audio tones are simply switches to the output amplifier stages on command from the CPU logic board.

The Vectorbeam™ Display Electronics is the final form of interpretation of CPU's calculations. The CPU logic informs the display electronics unit of information regarding line length and line placement on the CRT. This is accomplished with two twelve-bit words, one each for horizontal and vertical deflection, and a number of other controlling signals for the cathode drive circuit and switching in the deflection circuits.

The major difference between the vector generator and raster scan type monitors is the means by which the cathode beam is directed (deflection) across the screen.

In the raster scan types of display the electron beam from the cathode to the anode of the CRT is constantly deflected (scanned) across the face of the CRT in a series of horizontal lines that trace from the upper portion of the screen to the bottom in a synchronous pattern. Vertical information is added, also synchronous with the horizontal, forming a matrix type pattern of mathematically possible illumination points on the CRT. If the cathode current is increased at these points on the screen in matrix-type patterns (similar to placing dots on a piece of graph paper where the lines intersect) coherent video in the form of shapes and alpha-numerics to form the game backgrounds can be displayed.

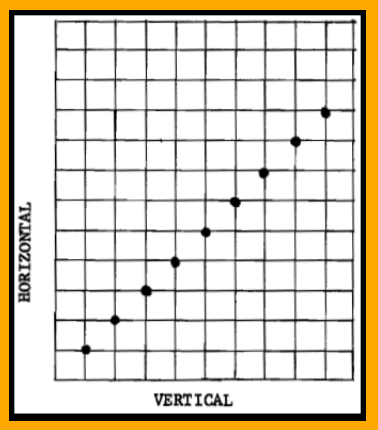
The vector generator takes a slightly different approach to cathode beam deflection. The results are a much higher degree of resolution and much smoother motion across the screen, as well as the ability to draw true curved lines on the screen. Rather than using a constantly scanning cathode beam, the beam is directed only to points of eventual illumination, using a vectoring form of programming rather than a matrix approach. Basically, the cathode beam is directed between two determined points, and illuminates the entire path of phosphores between these two points, unless blanked by stopping cathode current (i.e.: when the beam moves from one star to another on your screen). The ability to illuminate direction desired, (which is not possible in a raster scan system) creates a much higher degree of resolution than can be found in a raster scan system, while at the same time creating a much greater number of angle possibilities. This is also supported by the ability to accommodate two twelve-bit words of information, twelve each for vertical and horizontal deflection, and the fact that there is no background illumination from a constantly scanning beam when brightness is turned up. The higher degree of resolution combines with the totally blackened background creating an appearance of depth not found in a raster scan system.

Another major design difference is the fact that no sync. signals are needed to produce vectors on the CRT. This greatly simplifies the hardware design of the system, and therefore the understanding of the theory of operation, of the CPU logic as well as the display electronics.

VECTOR THEORY

In order to understand the basic concept behind a vector generated display, it is important to have a basic knowledge of vector theory.

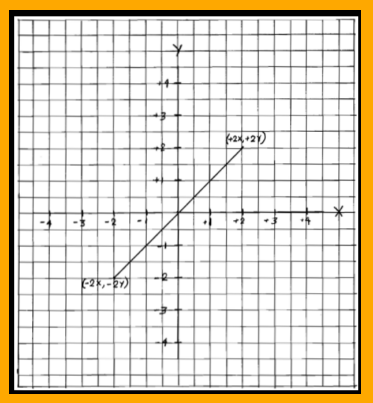
As mentioned, the raster scan display uses a matrix typer display pattern. A graphical representation of a matrix is shown below.



For example, to produce a line on the CRT with a matrix-type pattern, the appropriate intersection points of horizontal and vertical lines are illuminated. The calculations which select these points are made on the logic board, and converted into video information for the monitor to digest. Although there are space between the illuminated points, the illusion of a solid line is made by your eyes, and the resolution is determined by the number of available horizontal and vertical lines in the system, and the speed of the sweep.

In the vector display system, there are no horizontal and vertical lines (no sweep) or sync. a line created using a vector system as shown below.

A line is drawn by programming a beginning and ending point of the line to be drawn, and forcing the cathode beam to travel between these two points, illuminating the entire path of phosphorus on the CRT. The angle of the line, the position of the line, and the length of the line are determined simulta-



neously, and simply, by selecting the proper voltage levels for the beginning and ending points of the line.

The end result of using the vector generator is an immensely increased number of programmable point, which is in direct proportion to the word size and the capabilities of the DAC-80 (i.e., greater resolution, definition and smoother motion using minimum of hardware).

CPU LOGIC THEORY

The CPU (central processing unit) logic board used in Space Wars is not a micro-processor, but rather a dedicated TTL processor, much like a mini-computer would use.

The primary advantages of using a dedicated processor versus a micro-processor are that the CPU logic is much faster electronically, and it has the ability to use a word length designed for a specific task.

The primary disadvantages from a service standpoint, are that the system is heavily software controlled with it's own machine language and op-codes and there are a number of "loops" within the signal paths that are virtually impossible to trouble-shoot using ordinary means and techniques. The speed of the signals occurring on the CPU logic board are also a drawback of sorts, since very fast scopes must be used to analyze the signals.

Because of the difficulty encountered when service is necessary, a factory test fixture, a Hewlett Packard signature analyzer (model 5004A) and a specially prepared set of schematics must be used to repair the board. This trouble-shooting system has been designed to the point where virtually anyone with a minimum of electronics background is able to repair the CPU logic board.

Cinematronics, Inc.
1044 Pioneer Way
El Cajon, Calif. 92020
[714] 440-2933

Space War

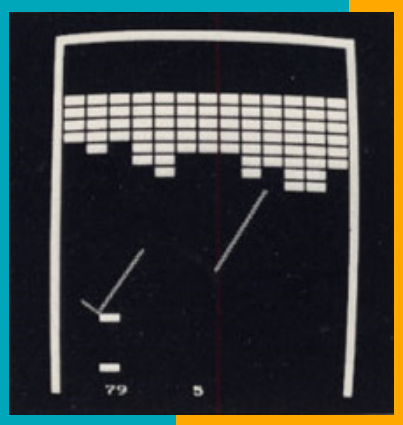
Manufacturer	*Vectorbeam*
Release	*1977*
Genre	*Space*
Cabinet Styles	*Upright* *Cocktail*

Space War is a 1977 clone of Cinematronics Space Wars- the first game to use vector graphics technology. The game is based on Spacewar! which was one of the first video games created. Space War and Space Wars are essentially the same game in different cabinets. The designer, Larry Rosenthal, of the original Space Wars and of vector-based graphic created Space War as well. After creating Space Wars at Cinematronics, Rosenthal felt that he was not getting paid enough. Rosenthal left Cinematronics taking the vector graphics technology with him. Under his own video game company Vectorbeam, Rosenthal made a copy of Space Wars and aptly named it Space War. The two-player Space War consists of two spaceships battling in outer-space. The game was made more complex by the introduction of the concept of damage: a ship could be damaged without being fully-annihilated. Space War allowed players to create the rules of their universe: the amount of gravity, the presence of absence of a star, and an open or a closed universe. Vectorbeam and Rosenthal's technology were eventually bought by Cinematronics. Space Wars was the start of a new generation for Cinematronics. The vector-based graphics became the foundation of Cinematronics games in the early 80s.

"museumofplay.org"

Special Break

Manufacturer *Rene Pierre*
Release *1977*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



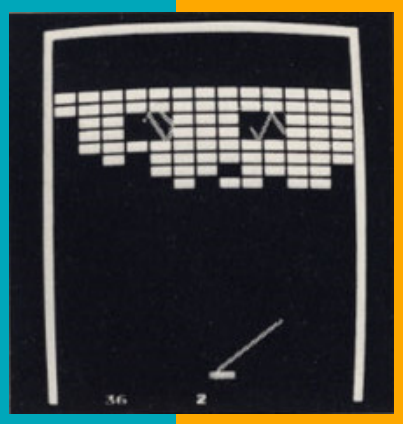
excerpt from the flyer:

"Special Break" Three games in one

Double Break

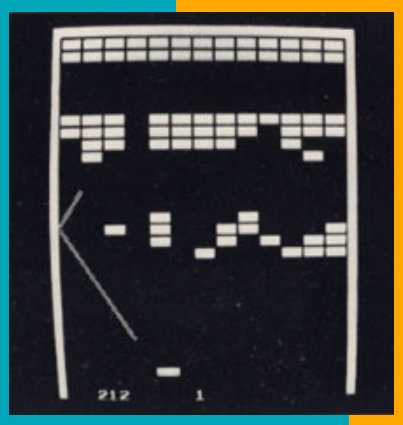
Play: Two balls are served to 2 paddles. Each bricks knocked out counts double as long as 2 balls are in play.

Scoring: As long as the player keeps its 2 balls, the mark ed points are counted double



Progressive Break

Play: Progressive Breakout starts with 2 "walls" of 4 rows of bricks that "fall" or scroll continuously from the top of the monitor. New rows of bricks will be entered from the top to form a pattern of 4 rows bricks separated by 4 rows of blank. This permits players to break through many times during play. As game progresses, the bricks "fall" faster and faster.



Cavity Break

Play: Two extra balls are "captured" in a cavity within the wall of bricks. These captured balls do not knock out bricks until they are freed from their cavities. This allows up to 3 balls in play at once. Each brick will count double when 2 balls are in play and triple when 3 balls are in play.

Scoring: Same as Double Breakout.

Springboard

Manufacturer *Subelectro*
Release *1977*
Class *Prototype*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Springboard is a clone Circus. The game is a breakout-type genre where players burst moving balloons at the top of the picture by bouncing a little man off a springboard. Arcade-museum.com list the game as a prototype, though a flyer was released.

excerpt from the flyer:

A British Manufactured Video Game

Object of Game:

To burst all the moving balloons at the top of the picture by bouncing the little man off the Springboard.

Features of Game:

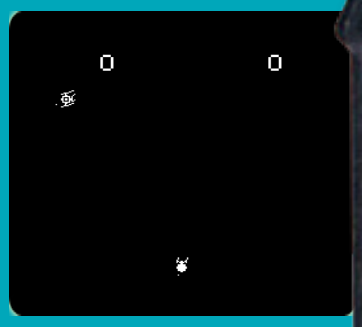
One or two players
Random free-play score (13000-27000)
No Bonus Jump
Realistic sound effects
Highest score of the day

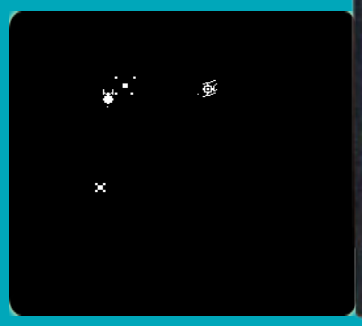
Machine Specification:

Built to fit average estate car (63 1/2” high x 27” deep x 25 1/4” wide)
Attractive double laminated Rosewood finish cabinet
Optional personalised company name displayed on screen in attract mode

Star Cruiser

Manufacturer *Ramtek*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3 [FireForward ThrustFire Guided Missle]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Star Cruiser is a one-on-one spaceship battle. Players fire on their opponent for points. The guided missile can be turned left or right with the directional buttons. This missile travels a long way. The regular fire only goes a short distance.

excerpt from the manual:

Star Cruiser is another Ramtek Amusement Device which is engineered to provide the highest degree of reliability using the most advanced techniques available. All solid-state circuitry ensures years of dependable service.

Star Cruiser is a two-player driving/shooting game where players use heavy cast aluminium steering wheels and aluminium pedals to control starships. The object of the game is to avoid being hit by your opponent's torpedoes and phasers while you try to hit his star cruiser.

Exciting firing and explosion sounds accompany the sound of the vehicle to provide a dynamic audio presentation.

While the Star Cruiser game is not coined, it displays an attract mode which consist of two star cruisers moving across the screen.

An actual game begins when players insert one or two coins (operator adjustable to work on one or two coins per play).

The star cruisers are now positioned at the upper left and lower right corners of the screen. Turning the steering wheel to the left rotates the star cruiser to the left, and to the right rotates the star cruiser to the right.

Actuating the foot pedal causes the ship to move forward accompanied by a "whoosing" sound. The ship can exit the screen only to reappear on the opposite side. The players can fire at their opponent by depressing a switch on the right-hand side of the steering wheel. As long as the switch is depressed, the phaser continues in motion, wrapping around the screen and re-entering on the other side. Releasing the switch causes the phaser to explode.

1977
58

Sprint 4

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *4 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Steering: *Wheel*
Shifter: *4-position (1/2/3/4)*
Pedals: *1 [Accelerate]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Stereo (two channel)*
Cabinet Styles *Upright*

Sprint 4 is the third Sprint game, but named such because up to four can play simultaneously (two on each side of the table-top machine). Players can select between about a dozen tracks where oil slicks and other cars (opponent or neutral cars) could make them lose control. Ratings: Granny, Rookie, Pro. Bonus time (extra 30 “seconds”) for completing enough laps.

excerpt from the flyer:

New Sprint 4™. New profit action.

New Sprint 4 has it **all!** All the exciting action features that players want, all the profit features operators want.

Features performance-proven in location after location in such famous Atari motor racing games as Sprint 2™, Indy 8™, and Indy 4™.

Challenge, realism, variety, fast action, competition. It’s all there in Sprint 4. And it’s in color!

10 games in one for 1,2,3 or 4 players.

10 different player-selectable tracks makes Sprint 4 a new challenge every time it’s played. Keeps players coming back again and again.

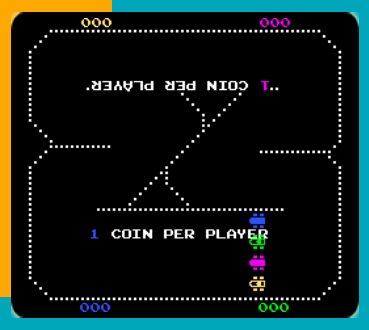
There’s an individual Track-Select button and Start button fro each player. And cars **not** being driven during a less-than-4-player race become “drone” cars, adding to the skill challenge.

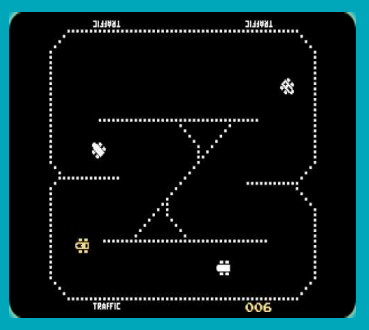
Big 25” color monitor gets more attention, more action.

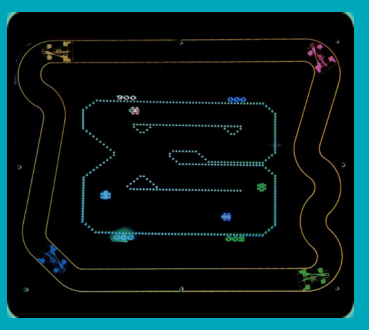
Each player drives his own color car. The score color matches the car, so there’s no confusion. The mew Big One even has larger race car pictures in 2 different styles.

More realism.

Life-like steering wheels, durable 4-speed shifters and gas pedals literally put the player in their own Grand Prix racer.







Sprint 8

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *8 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
- **Steering:** *Wheel*
- **Shifter:** *4-position (1/2/3/4)*
- **Pedals:** *1 [Accelerate]*

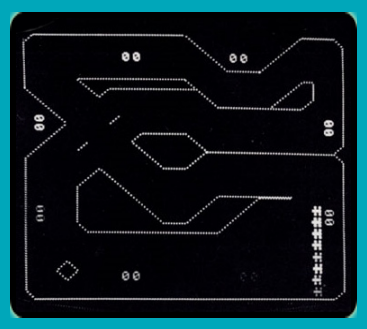
Monitor
- **Orientation:** *Horizontal*
- **Type: Raster:** *Standard Resolution*
- **CRT:** *Color*

Sound *Amplified Stereo (two channel)*
Cabinet Styles *Upright*

Sprint 8 is a racing arcade game; it utilizes a Motorola M6502 (running at 1.005 MHz), and as the name suggests, it is the sequel to Sprint 4 which was released in the same year. The players must use a steering wheel and a four-position gear shifter to take control for a car (red for 1P, blue for 2P, yellow for 3P, green for 4P, magenta for 5P, beige for 6P, turquoise for 7P and peach for 8P), with two pedals to make them accelerate and decelerate - and, if there are less than eight players, the remaining cars will be controlled by the CPU and their score displays will again say “TRAFFIC”, instead of a number. As with the first two games, the object is to drive around the chosen track as many times as possible; players receive 1 point for every metre travelled, but as in that previous game, the game timer is not displayed upon the screen (so players again can not tell whether they have earned enough points to extend it) - but that required value is, again, 250. Once it runs out, all the players will once again be rated “GRANNY”, “ROOKIE”, or “PRO”; there is only four tracks to choose from this time, which is eight and six less than the amounts for the first two games.

excerpt from the flyer:

Performance package.
Durable steel gas and brake pedals, 4 dual coin mechs, and locking boxes, round out Sprint 8’s features. (There’s even built-in ash trays).



Starhawk

Manufacturer *Cinematronics*
Release *1977/1979*
Class *Wide Release*
Genre *Space*
Hardware *Cinematronics B&W Vector*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Controls
Joystick: *8-way with button*
Buttons: *3 [Slow|Medium|Fast]*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the flyer:

3-D ACTION
Ships manoeuvre and explode in all directions

3-D REALISM
Clearest picture in video history.

3-D PROFITS
Coin accumulator and unmatched player appeal for 1 or 2 players.

DIMENSIONS:
72” high x 28” wide x 30” deep

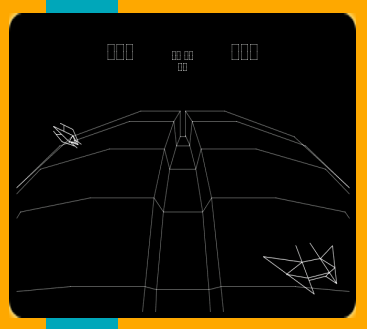
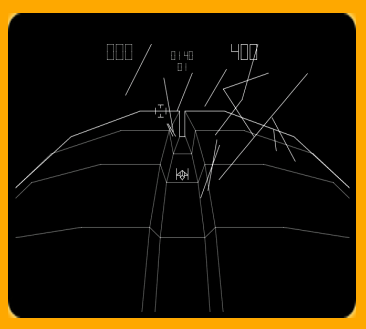
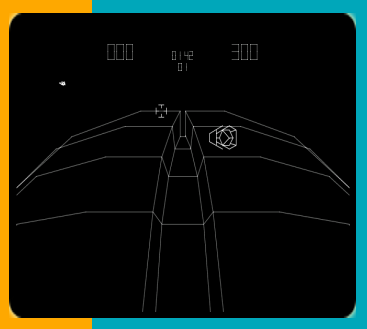
90 day warranty on major components

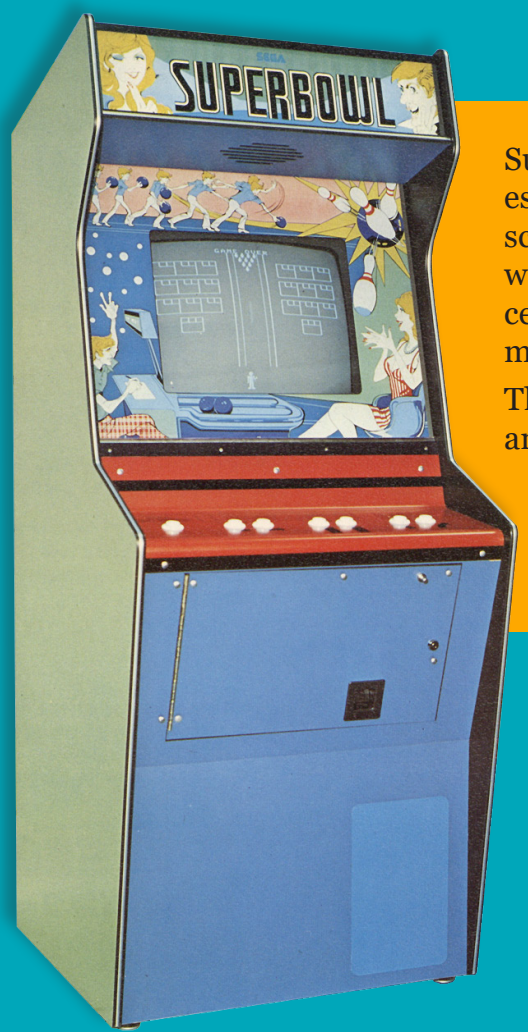
Starhawk is a 1977 (unlikely) or 1979 vector arcade game designed and programmed by Tim Skelly and manufactured by Cinematronics. Starhawk is a shoot ‘em up unofficially based on the Star Wars: Episode IV trench run, the first arcade game to blatantly use concepts from Star Wars. The game was unique at the time for its pseudo-3D graphics. It was released for the Vectrex home system in 1982.

The arcade cabinet had to have a cinder block placed inside of it, to prevent it from tipping onto the player.

Various ships, highly reminiscent of TIE fighters, appear on the horizon of the trench and the player has to shoot them before they destroy the player’s ship. The player is given initially sixty seconds and the counter is continually decrementing, but increases as the player destroys enemies. Twenty seconds is given for every 10,000 points scored. It is feasible that a good player could play indefinitely. The player would continue flying down the trench towards a specific target similar to the Star Wars Death Star target. The game will get progressively more difficult as the player advanced. Similar to the flying saucer from Space Invaders, a command ship will periodically appear and will attempt to shoot at the player. If the command ship was not destroyed quickly, the player lost 800 points.

Besides the firing button, there are three buttons that control the speed of the crosshairs.

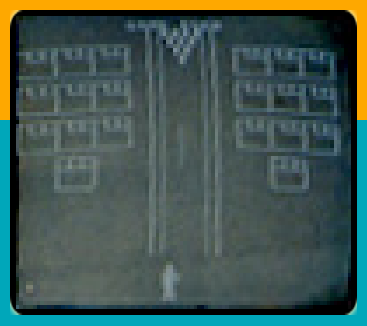






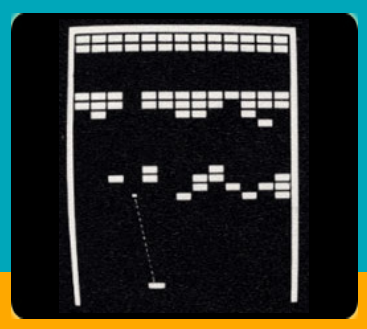
Super Bowl

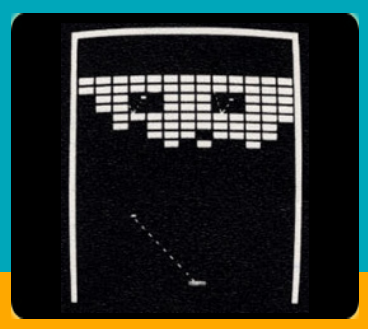
Superbowl is a top-down arcade 10-pin bowling game (most sources on the internet characterize the game as a football game, though screenshots confirm it to be a bowling game). The game is a reworked version of Robot Bowl, a 1977 arcade game by Exidy (licensed to Sega). Super Bowl was released exclusively to a Japanese market.

The player has buttons to adjust the throwing position, pitch, speed and steer.



Manufacturer *Sega/Gremlin*
Release *1977*
Class *Wide Release*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Super Crash

Manufacturer *Video Games Gmbh*
Release *1977*
Genre *Breakout*
Cabinet Styles *Upright*
Cocktail
Mini

Super Crash is a version of the popular Atari “Super Breakout” made in 1977 by Video Games Gmbh. of Lich. W.Germany. They also made “Crash,” a version of Atari’s “Breakout”.

The game advert itself as a three-in-one machine. Games include Cavity, Progressive, and Double

Subs

Manufacturer *Atari*
Release *1977/1979*
Class *Wide Release*
Genre *Shooter*
Hardware *Atari B&W Rasters*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Steering: *Wheel*
Buttons: *1 [Launch Torpedo]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Two monitors
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

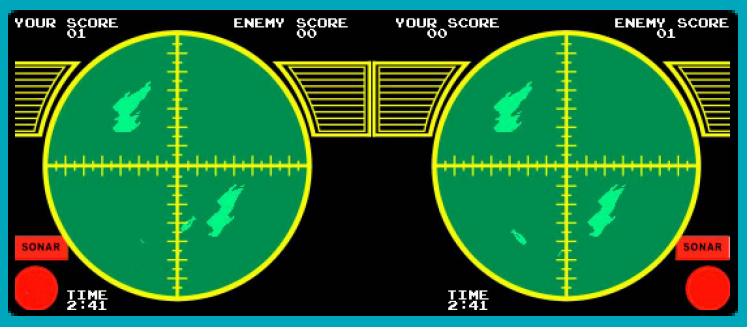
Concept art

Subs was the first arcade game to use dual monitors and because of this dual screen configuration the cabinet is pretty unique looking. At a 45 degree angle on both sides of the cabinet each player has his own controls and monitor that the other cannot see. Players can either play 1 player against the computer or 2 players against a friend.

The object of Subs is to find and destroy the enemy's sub. Since players cannot see the enemy's submarine there are clues they must use to track it down. There is a small sonar display in the bottom corner of the screen that will sweep the area ever few seconds and give an approximate location of the enemy. If one player runs into an island or hits the edge of the playfield the player will become visible. Torpedoes are always displayed on both monitors so firing one will give away the sub's position. Using these clues player must maneuver their submarine into position to lunch torpedoes in the direction of the enemy but they are only allowed two torpedoes in the water at a time. The controls for the sub are a steering wheel which turns the sub left or right and a Torpedo fire button. The subs are always moving forward and there is no way to control the speed. The recommended game time is 90 seconds but can be set from 30 seconds to 4 minutes in 30 second increments. The person who has destroyed the most subs when the time runs out wins.

The game came in a wide cabinet and has a large marque in the front center that lights up.

"blinddog@retroist.com"



excerpt from the flyer:

• World's first 2-monitor action video game.
• 2 players against each other; 1 player battles computer.
• Players use "SONAR" monitor display to find opponent hidden from sight on other monitor.
• Operator selectable "game credit" or "game time" option.
• Attention-getting sonar "ping" and explosion sounds.
• Eye-catching cabinet.
• 4 language options.

Players must "find" opponent's sub indicated by a visual "blip" on his Sonar monitor display. Only player's own submarine is visible on his monitor. Opponent's sub is visible only if it is hit, crashes into Islands or other player's sub. Player aims his sub at position of opponent indicated by *blip* and fires torpedos. "Hits" are registered by explosion sounds and *video* score display. Because opponent's torpedos are visible, each player can steer evasive action or "hide" behind island obstacles to avoid being hit.

Double the action! Double the profits!

Subs is another totally new concept in video skill attractions. **Another world first from Atari.**

It's the world **first** and only action game to use *two* video monitors... for double action, double earning power!

The result is dynamite... a realistic "search-and-destroy" sub battle. And a new opportunity for extra profits in **any** locations.

High skill challenge for one or two players!

Split-second timing and anticipation are the keys to victory.

One or two players can test their skill. (Single-players compete with the computer).

More operator option for extra profits.
"Time" Mode: Operators may select to offer game times of 0:30, 1:30, 2:00, 2:30, 3:00, 3:30, 4:00 minutes per coin.
"Credit" Mode: Operators may choose to offer game credits of 1 player per coin with selectable game times from 0:30 to 4:00 minutes.
"Attract" Mode: Sonar "ping" sound effect may be turned on or off during attract mode.

Add-A-Coin coin accumulator lets profits play longer!

SUBS built-in replay incentive is irresistible... players will want to buy extra time. Atari's coin accumulator feature lets players extend action time before, during or after the game while SUBS is in "Time" mode.

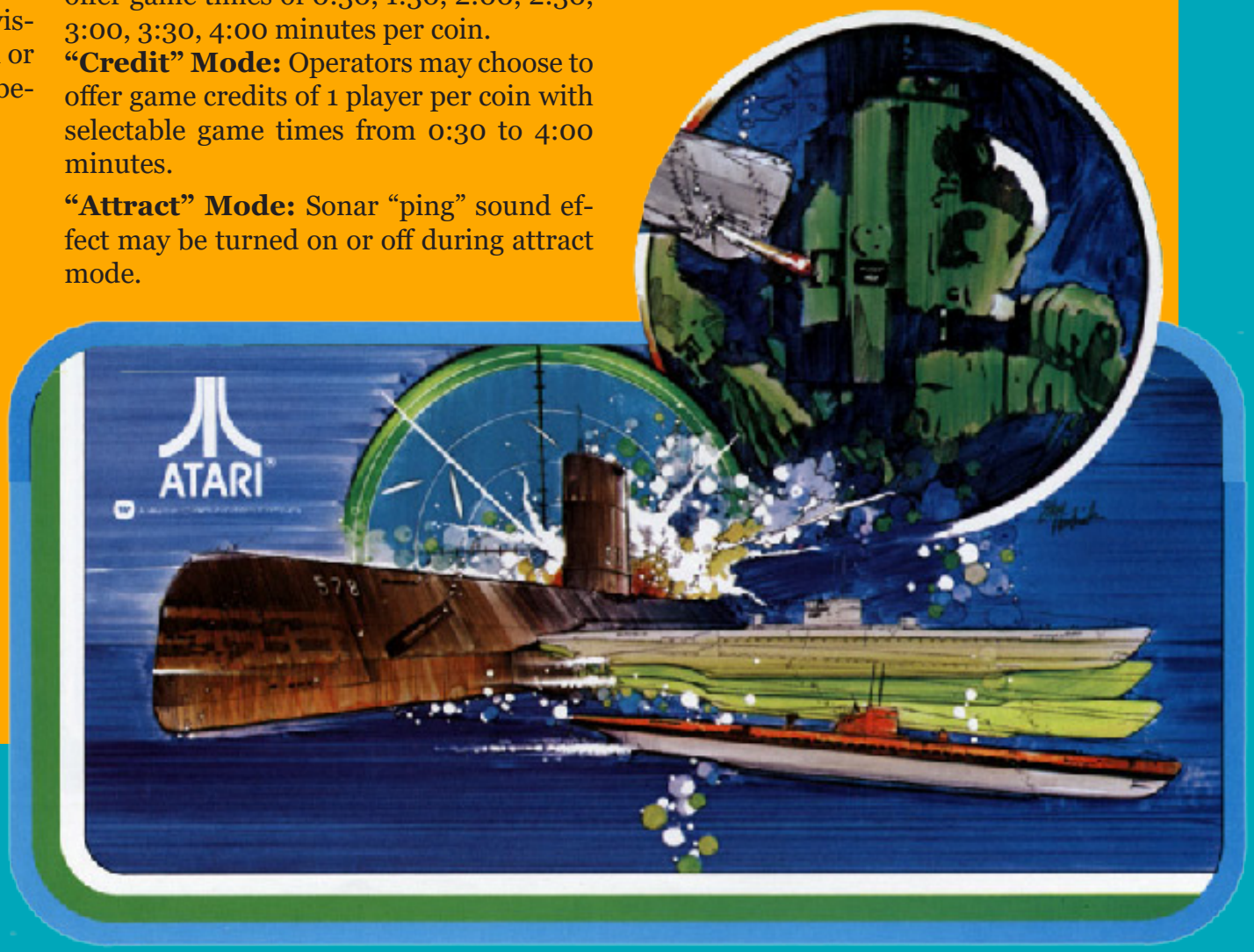
Coinage: Time Mode. Credit Mode, 1 coin per player. Free play.

Four Languages: Operators-selectable for English, French, German or Spanish video message presentation.

Built-in Self-Test System:

Atari's unique self-test program displays all microprocessor functions, on-the-spot for instant trouble shooting.

Dimensions:
Height: 70", 178 cm; Width: 44", 112 cm; Depth: 24", 61 cm.



Super Bug

Manufacturer *Kee Games*
Release *1977*
Class *Wide Release*
Genre *Racing*
Board pin *Super Bug Pinout*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
- **Steering:** *Wheel*
- **Shifter:** *4-position (1/2/3/4)*
- **Pedals:** *1*

Monitor
- **Orientation:** *Vertical*
- **Type: Raster:** *Standard Resolution*
- **CRT:** *Black and White with a Color Overlay*

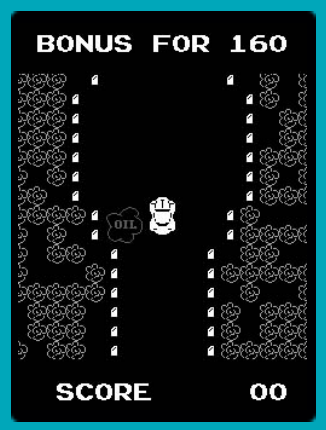
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

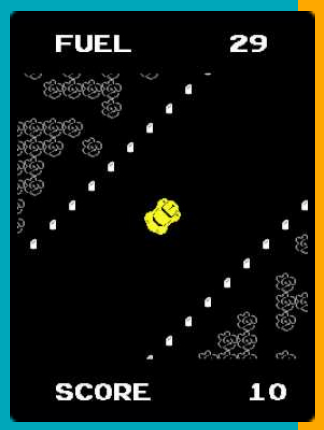
Super Bug is an arcade game developed, manufactured, and released by Atari in 1977. The player steers a yellow Volkswagen Beetle (or "Bug") along a multidirectionally scrolling track, avoiding the boundaries and occasional obstacle. The game ends when fuel runs out. Super Bug is in black and white, and the colored car comes from a yellow overlay in the center of the monitor.

The 1978 Atari arcade game Fire Truck is based on Super Bug. Both games were programmed by Howard Delman.

Originally titled City Driver, Super Bug was the first to be designed and programmed by Howard Delman. Delman stated in an interview that he had to learn a lot of the game development process during the nine months it took to create Super Bug.

Joe Decuir of Atari was writing an Atari 8-bit family version of the game, but it was never finished.





excerpt from the maual:

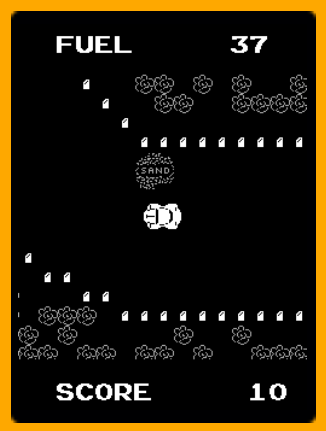
INTRODUCTION

Super Bug is a one-player driving game developed Kee Games. The game is packaged in a distinctively styled upright cabinet that rests directly on the floor. A 23-inch TV monitor is mounted in the top front of the cabinet, with the monitor viewing screen slightly tilted from the vertical. Player-operated controls are mounted directly below the TV monitor viewing screen on the front of the game cabinet. The controls consist of a steering wheel, a four-speed gear shifter, an accelerator foot pedal, a pushbutton for track difficulty, a start pushbutton, and a pushbutton for high score reset.

Two identical coin mechanisms are mounted on the lower front center of the game cabinet, below the steering and shifting controls. Either of these two mechanisms can initiate play. The cash box is located behind a locked access door below the coin mechanisms.

The player's objective is to manipulate the Super Bug along the track in a race against time. The player must avoid sliding in oil pools in the road, or dropping into sand pits, as well as avoiding other cars, while keeping the Super Bug within the boundaries of the road.

Acceleration is as in a real car. Start out in anything but first gear and the car accelerates slowly. Once the car is moving, shifting into progressively higher gears increases the speed of the car. If the car goes into an oil slick or sand pit, it slides, with sound of sliding from the game cabinet speaker. If the car drives into a track boundary, a tree, or another car, a crash sound will be heard from the game cabinet speaker and the TV monitor viewing screen will flash.



excerpt from the flyer:

Super Bug! Super Thrills!
Super Bug is a completely new single-player driving challenge. A bright yellow "modified bug" speeds through tree-lined city streets in a fast moving rally race. The constantly moving streets provide new excitement and driving challenge every time the game is played, as the driver races the clock to cover as much distance as possible for highest score.

Directional arrows appear on the road to warn drivers as they approach turns. Quick reflexes are a must to avoid crashing into curbs and parked cars. And to avoid sliding into oil slicks and sand traps.

Players select "Novice" or "Expert" tracks, shift into first, step on the accelerator and take off. The roar of acceleration, crash and skid sounds add to the excitement. Score, Fuel (time remaining) and driver Ratings are displayed on the screen, as well as "Crunch" whenever the player crashes.

Exclusive Operator Options.
New with Super Bug! Now video messages can be operator selected to display: English, German, Spanish or French.

Game Time is adjustable to **60, 90, 120** and **150** seconds.

Extended Play. Three optional bonus levels for each game time.

Coinage. 1 or 2 coins per play, 2 plays per coin.

Exclusive New Coin Door. Super Bug also comes with Atari's new coin door designed for trouble-free, tamper-proof operation.

Self Testing Means More Earnings.
Atari's unique built-in self diagnostic program displays all micro-processor and memory functions including game options for easy on-the-spot checking and trouble-shooting.

Put Your Money on a Winner.
Durastress™ tested all solid-state reliability, durable running gear, Instapart™ 24-hour parts turnaround helps keep the bugs out of Super Bug.

SUPER BUG
· Fast, 1-player driving action
· Unpredictable track makes each game a new game
· Durable 4 speed shift
· Players can choose "novice" or "expert" track
· New French, German or Spanish video message options
· Built-in self-test program
· Optional extended play
KEE GAMES
SUPER BUG
© ATARI, INC 1977

Super Death Chase

Manufacturer *Exidy*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player Controls Differ*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Stereo (two channel)*
Cabinet Styles *Upright*

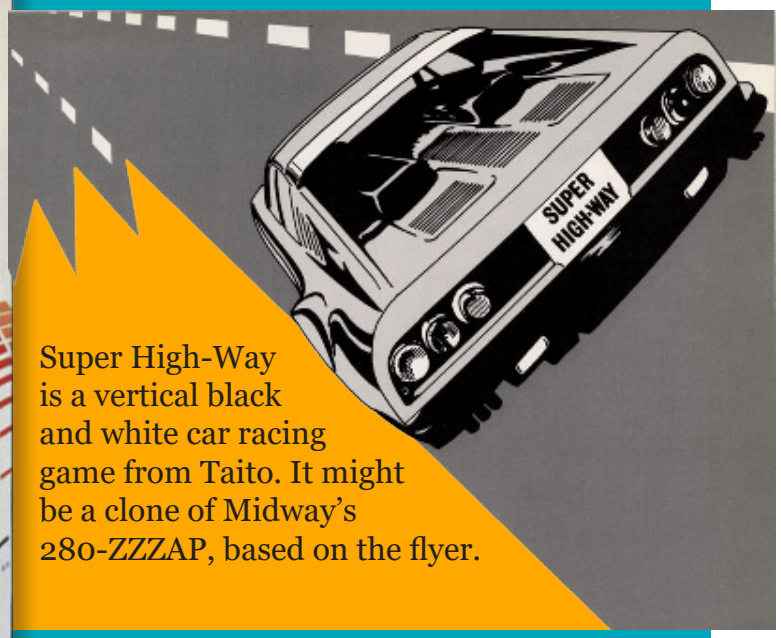
Super Death Chase is a sequel to Death Race. The game is a modified version of the original designed by Arlen Grainger. It featured skeletons in place of "gremlins" (perhaps in an effort to avoid the controversy that had plagued its predecessor), a randomly appearing ghost and a 36-inch-wide cabinet. The game was shown at the 1977 AMOA show, but apparently never made it into full production and only a few units were built.

"allincolorforaquarter.blogspot.no"

Review by: Play Meter (jan.1978)

Exidy was another company that showed a "re-hash" of one of its own past successes. If the media thinks they've buried Exidy's infamous Death Race, it appears that they have another thought coming. Don't tell them, but Death Race has risen from the grave and has been resurrected in to a new game called **Super Death Chase**.

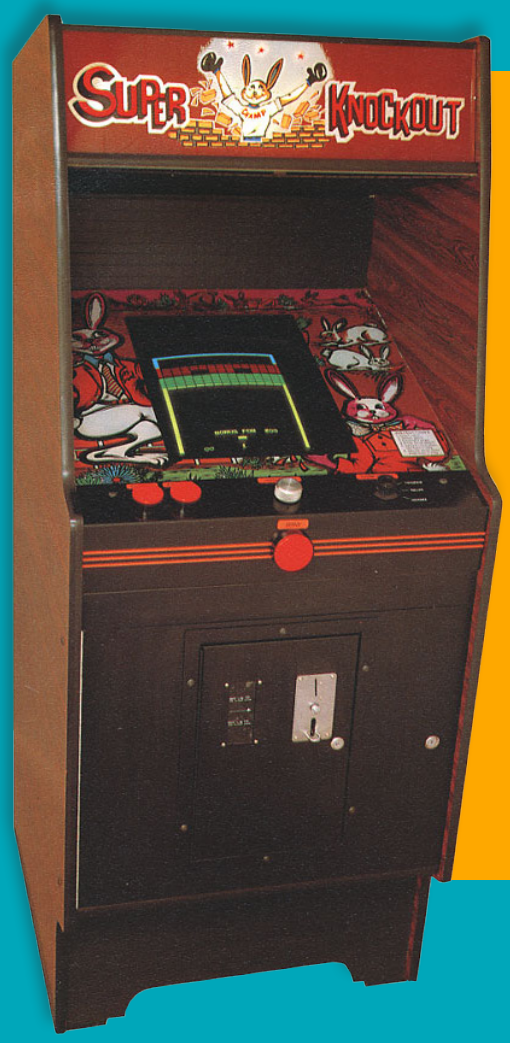
Boasting of a new 36-inch wide cabinet, **Super Death Chase** offers plenty of room for two players. Players controls are the same as in Death Race, and the object is the same - to wipe out as many skeletons as possible within the allotted time.



Super High-Way is a vertical black and white car racing game from Taito. It might be a clone of Midway's 280-ZZZAP, based on the flyer.

Super High-Way

Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Racing*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Shifter: *2-position (low, high)*
Pedals: *1*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Super Knockout is a colorful ball and paddle game where the player destroys bricks by bouncing the ball at them with the paddle. The game is similar to “Breakout”.

excerpt from the flyer:

A BRITISH MANUFACTURED VIDEO GAME
A micro processed game of highly successful wall game.

OBJECT OF GAME:
To eliminate as many brikcs as possible.

FEATURES OF GAME:
One or two players
Choice of three games at player’s option
Game one “Twosome”
Game two “Escape”
Game three “Advance”
Variable ball speed
Variable bat size
Highest score of the day for each game displayed

Super Knockout

Manufacturer *Subelectro*
Release *1977*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

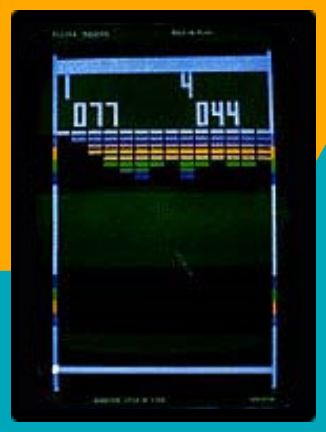
T.T Block

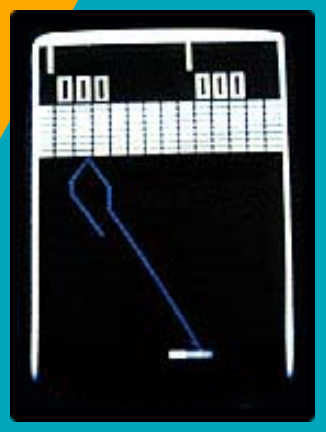
Manufacturer *Taito*
Release *1977*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

T.T Block is a a ball and paddle game where players control a paddle and tries to rebound a ball into the bricks.

The initials TT stand for T able T ype, a definition by Taito to indicate that it is a cocktail type cabinet .

TT Block is a very interesting title from a technical point of view. Although it was made in 1977 , its set of two logic cards does not use any type of processor or EPROM . The only type of electronic component is a logical port type. For this reason TT Block can not be emulated.





Tic Tac Quiz

Manufacturer *Sega*
Release *1977*
Class *Wide Release*
Genre *Trivia*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

excerpt from the maual:

TIC TAC DOUGH.

In our business, it's not how you play the game - but how often. So SEGA has come up with TIC TAC QUIZ, the game nobody plays just once.

Designed to harvest quarters everywhere, from the cocktail lounge to the arcade, this challenging new game combines Tic-Tac-Toe with a video quiz.

Here's the way it works. A quiz question appears on the screen demanding an AGREE or DISAGREE answer. If the player answers correctly, his X or O appears in the chosen square. If he's wrong, his opponent's symbol appears instead. The first player who gets three X's or O's in a row, or five of a kind, wins. And since TIC TAC QUIZ stores 2,500 questions for random call-up, the game never loses its appeal.

Both models (table and upright) can be operated by one or two players, one or two coins, and let you adjust time limits and free game options.

TIC TAC QUIZ is built in America by SEGA, so it's exceptionally rugged, reliable and simple to service. The control switches have no moving parts, are sealed against liquids and may be cleaned with a sponge.

A flip-top, fold-out cabinet design reduces service time to a minimum.

If making money instead of service calls appeals to you, ask your area distributor about the sensational new TIC TAC QUIZ.

The more you look into TIC TAC QUIZ, the better it looks.

- Mar-proof, drink-proof, burn-proof surface.
- Sealed switches with no moving parts to wear out.
- Both top and TV flip up for easy servicing.
- Reliable Motorola monitor.
- Trouble-free tape cassette player.
- Stylish formica cabinet for long life and high trade-in.

Coin Conditions:
Operator may select one of three modes.
1. one coin (25¢) one or two players
2. two coins (50¢) one or two players
3. one coins (50¢) two players

Coin Conditions:
Previous game (X's and O's) displayed on CRT.
Winning combination flashing 1 sec. rate.
Last question, answer and correct answer displayed
No sound. No flashing lights.
No instructions - displayed in hard copy on glass top.

Twin Course T.T.

Twin Course T.T., is a discrete logic arcade game released by Sega in 1977. It is motorbike racing game, a two player version of Man T.T.

Though the cabinet has two screens and two sets of controls, the games are not linked - it would be many years until actual twin arcade cabinets were produced, Sega's first effort being Rad Rally in 1991.

This game is virtually unknown as like many Sega releases from the 70s, there is little information to be found on it

Manufacturer *Sega*
Release *1977*
Genre *Racing*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Either*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

World Cup

Manufacturer *Sega*
Release *1977*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: *TV Monitor*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

World Cup is a a competitive soccer-like ball and paddle game from Sega.

excerpt from the maual:

Two teams are fielded and the team that takes the ball after kick off surges forward towards their opponent's goal. If the ball carrier is touched by an opponent team member, the ball is immediatly taken over by the opponent. The ball can be passed at will but - watch out for interceptions.

U.N. Command

Manufacturer *Project Support Engineering*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

U.N. Command is apparently a two-player version of Bazooka. No apparent additional evidence of this is found to date. The game is currently suspected not to exist.

Jim Hernandez's old game list mentions a game named "U.N. Commander" but no other info. It might be this one.

"mamedev.emulab.it"

Triple Hunt

Manufacturer *Atari*
Release *1977*
Class *Wide Release*
Genre *Shooter*
Hardware *Atari B&W Raster*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Triple Hunt's main feature is its mounted light gun, which is used to shoot at the screen on a separate cabinet. Each Triple Hunt unit houses three changeable games; Witch Hunt, Hit The Bear, and Raccoon Hunt. The game graphics are displayed over the background graphics, and when a monitor mask is placed on the screen, the graphics 'disappear' behind the mask. Since the gun is light operated, the shots would not go through the mask, and did not count. It was first introduced at the Third Annual Distributor Meeting banquet on March 22, 1977.

Unique amongst other games at its time, Triple Hunt contains three different games, each played by solely using the light gun. The three games had to be swapped out by the operator by changing the graphic panels and flipping a switch. The objective of all three games is to simply earn the highest score possible before a timer ran out. The player has no limit on the number of shots fired, and the gunshots will display on the screen one at a time. A timer in the corner of the screen counts down until the display reaches "00". However, if the operator has turned on extended play and the player's score exceeds the extended play score, then the player is given extra play time, and the timer increases to half of the original value.

Hit The Bear focuses on the player aiming for and shooting at either a large or a small animated bear that walk through an on-screen forest. When a bear is hit, it would stand, roar, and turn around to walk in the opposite direction. Once a bear walks off of the screen, the other would walk back on screen in the opposite direction. Each game lasts for 100 ticks, unless extended play is activated.

Raccoon Hunt has the player shooting at up to four raccoons as they climb up the screen. Instead of a timer, the counter in the corner shows how many raccoons will appear. The raccoons climb up the screen faster as the player's score also increases through four levels, and once the counter reaches 00, the game will end.

Witch Hunt features a haunted house with witches, ghosts, and bats emerging from holes. The player must shoot at all characters on screen until the timer runs out to 00. Witch Hunt also includes over three minutes of background sounds., which were provided from a hybrid of solid state sound sources and 8-track tapes.

TRIPLE HUNT™

excerpt from the maual:

Atari's Triple Hunt is a one-player gun game housed in two upright cabinets that rests directly on the floor. A rifle-type gun is mounted at the top of one cabinet, and a TV monitor, on whose screen the target object appear, is mounted in the cabinets. An adjustable-length support tube and plate assembly connects between the cabinets. It adjustable feature allows the operator to easily change the separation distance between cabinets to any value between 5 ft. and 10 ft. The game does not require any bolt connections to the floor at the game site.

The game's only player-operated controls are a trigger on the gun and a backlighted Start pushbutton that is mounted on top of the cabinet with the gun. On the player side of this cabinet two identical coin mechanisms and two speakers are also mounted, below the gun. Either coin mechanism can initiate game play; the coin box is located behind a locked access door to the mechanisms. During play the speakers add to the game excitement by producing continuous background sounds, gunshots when the trigger is pulled, and other special "hit" sounds whenever a player's shot hits an object on the TV screen.

A unique feature of this Atari game is that at the game site the operator can easily change it back and forth between *three* different game play configurations. These configurations are named Hit the Bear, Racoon Hunt, and Witch Hunt; each has its own combinations of graphic panels, target objects and distinctive sounds produced during play. All parts needed for changeovers from one play configuration to another are provided with the game and are stored inside the game cabinets when not in use. The changeover can be done in less than one hour, and no special tools or technical skills are required. Therefore, this feature in effect provides the operator with a 3-game capability from 1 cabinet set.

Another important game feature is a set of switch-selectable options that give the operator three choices for cost per game play, four choices for the length of game play, and a choice for allowing extended play or not.

The special "High Score" display is a game feature that increases player incentive to try out the game, and also to play it over again as well. "High Score" is a numerical display that only appears on the TV screen between game plays. The game's microcomputer system begins remembering the highest number of score points earned by any player as soon as AC power is turned on. After each game play ends, the microcomputer puts this number on the screen and the words "HIGH SCORE" right below it. Persons looking at the screen are then challenged to beat the high score player, even long after that player has walked away!

The game also has a built-in self-test feature. The self-test will confirm correct game operation when all components are working properly, and will speed up the troubleshooting steps if a component has failed. The failure information is automatically displayed in letter codes directly on the TV screen, and the self-test can be performed by a person not having special technical training in electronics.

Service. The Easiest Target.
Atari's exclusive built-in self-test and options check program lets you trouble-shoot on the spot. And because gun and display modules are fixed in position when installed, line-up from game to game is always accurate.

Dimensions:
Gun Mount: Height 44", 111.76 cm; Width 25.25", 64.14 cm; Depth 44", 111.76 cm.
Monitor Module: Height 66", 167.64 cm; Width 25.25", 64.14 cm; Depth 44", 111.76 cm.

Telescoping connecting conduits let you place the Gun Mount 5 feet to 10 feet away from Monitor Module.

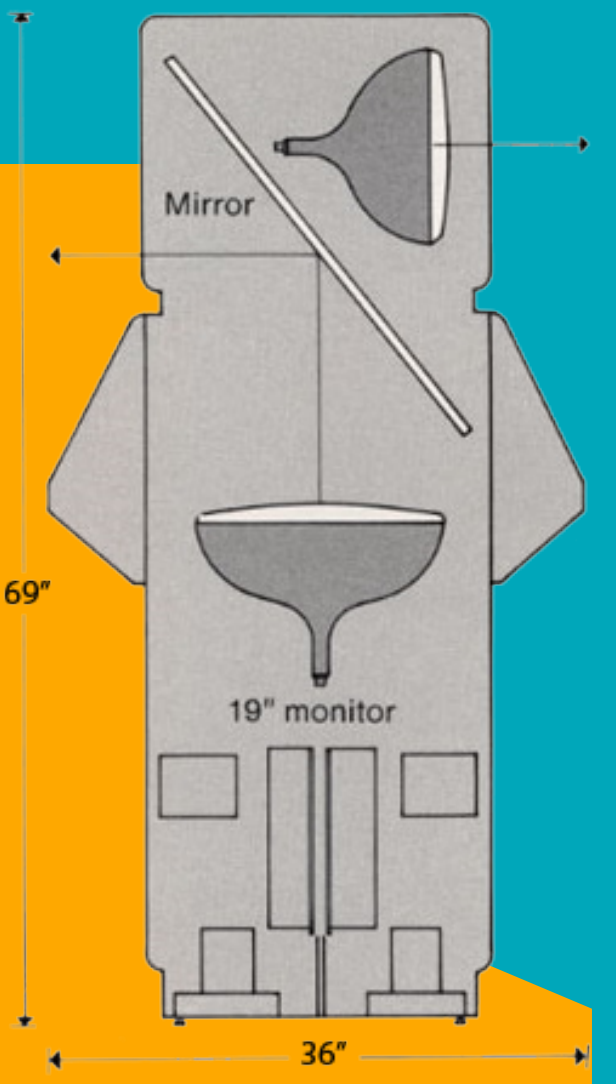
Take Aim
All of Triple Hunt's 3 games have strong appeal to players of all ages.

2 Game Module

Manufacturer	*Atari*
Release	*1977-1978*
Class	*Wide Release*
Genre	*Compilation*
Gameplay	*Alternating*
Cabinet Styles	*Upright*

This Atari release combines 2 games and 2 monitors into a single cabinet that didn't take up much more space than a standard cabinet. One monitor was mounted in the bottom of the cabinet pointed upwards and the image was reflected to the player with a mirror at a 45-degree angle. A unit was on display at the 1978 IAAPA show.

"allincolorforaquarter.blogspot.no"



excerpt from the maual:

The *2 Game Module* is a unique new game configuration that combines the tremendous popularity of Atari video games with contemporary appearance and space-saving cabinet design to offer new location possibilities. And new profit opportunities.

It can literally be placed *anywhere*, providing enjoyment for a completely new group of potential players. And an expanded profit base for your operations.

Two can play.

In an area no more than 6 1/2 square feet, the *2 Game Module* can double the revenues of a single cabinet game in the same amount of floor space.

Place it against a wall, set it up as an island entertainment center or arrange them in rows, the *2 Game Module* offers unlimited installation versatility.

We're playing your game.

The games that are built into the *2 Game Module* are *proven* Atari winners. Since they are not interchangeable, thorough researched confirmed that the games selected have long-term appeal for players of all ages and tastes, as well as a positive long-term collection history.

They are games that include our exclusive self-test system for on-the-spot checking. And they are supported by the most thorough distributor and factory service in the industry.

Available in two different models: Avalanche™ and Super Bug™ included in one and Breakout™ and Sprint 1™ in the other. All four games, Avalanche and Super Bug; Breakout and Sprint 1 have been selected due to their high collection record and long earning life.

3-D Bowling

Manufacturer	*Meadows*
Release	*1978*
Class	*Wide Release*
Genre	*Sports*
Mode	*2 Players*
Gameplay	*Alternating*
Panel Layout	*Single Player*
Monitor	
	Orientation: *Vertical*
	Type: Raster: *Standard Resolution*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*
	Cocktail

3-D Bowling is a black-and-white bowling game from Meadows.

excerpt from the flyer:

All the excitement and emotion you'd feel if you were really trying to bowl that 300 game.

The ball is automatically served to the next bowler up. It comes from the pin area, down the gutter, and into the bowler-figure's hands. The bowler immediately stands up. The player moves him into the lane and lines him up. Hopefully for a strike!

The ball can be thrown fast or slow. The "Flim-Flam Hook" will make the ball move in a right or left direction as long as the hook button is depressed. Let up on the button and the ball straightens up.

Watch the figure on the TV! Slow Flim Flam hook action, he'll do slow "Body English." Fast back 'n' forth Flim Flam hooking, he'll dance a jig!

STRIKE! The bowler jumps up and down; the spectators cheer with clapping, whistling, and footstomping sounds.

OPEN FRAME? Happens to the best of bowlers. The man throws his hands to his head in exasperation.

TEETERING PIN! Watch it. Sometimes it teeters and stays up; you've blown a spare.

BEER FRAME! What's more American than mom and apple pie? Bowling and beer frames. You never know in which frame it's going to appear. Adding excitement and suspense, the Beer Frame comes up randomly anywhere from frame 1 to 9. (Operator option)

FLIP-FLOP FEATURE on 3-D cocktail table. When there are two players, opponents sit opposite each other and the full alley is presented to each as his turn comes up.

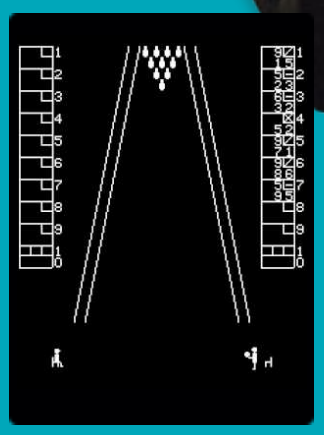
STRIKINGLY HANDSOME cocktail table with burnt orange laminate top and black padded vinyl sides.

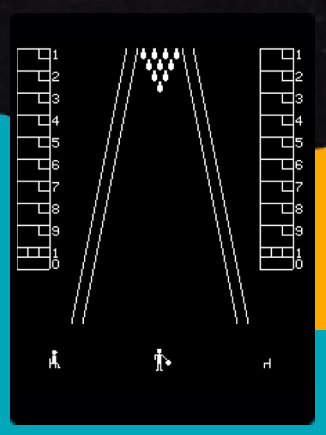
NEW PROFIT OPERATOR OPTIONS

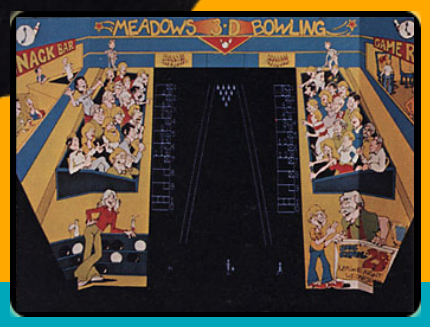
Game time is operator adjustable to 3, 4, 5, or 120 seconds before ball is automatically bowled. (No time limit also available.)

Coin Options. 1 coin per player, 2 coins per player, or 1 or 2 players per coin.

At no extra cost and always standard: Motorola monitor (23" Upright; 19" Cocktail Table). Meadows quality and reliability.







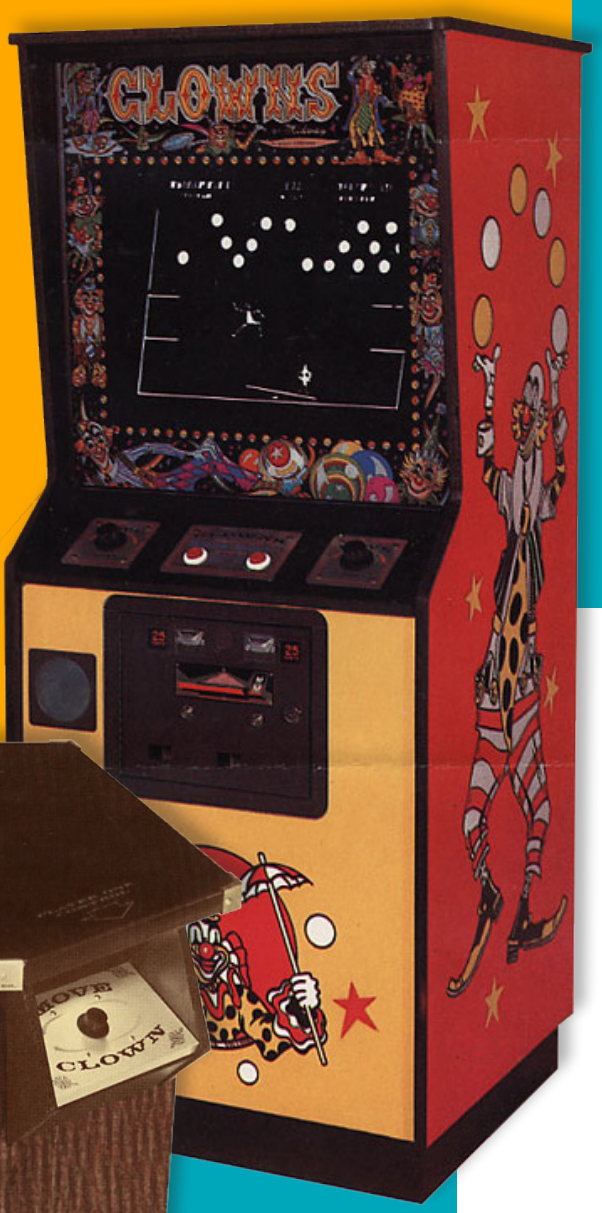
Acrobat and Clowns is a clone of Circus by Exidy. Players bounce a character around on a seesaw and break balloons.

excerpt from the Clowns Flyer:

- A fun filled one or two player game with dual controls
- Players bounce clowns off “see-saw” to break rows of balloons for high score and bonus jumps
- ‘Clowns’ features a 23” solid state monitor
- Electronic musical sound effects
- Adjustable jumps 2, 3, 4, 5
- Bonus jump feature
- Adjustable pricing
- Double 25¢ coin chutes
- Micro processor logic system
- Built in ROM and RAM testor

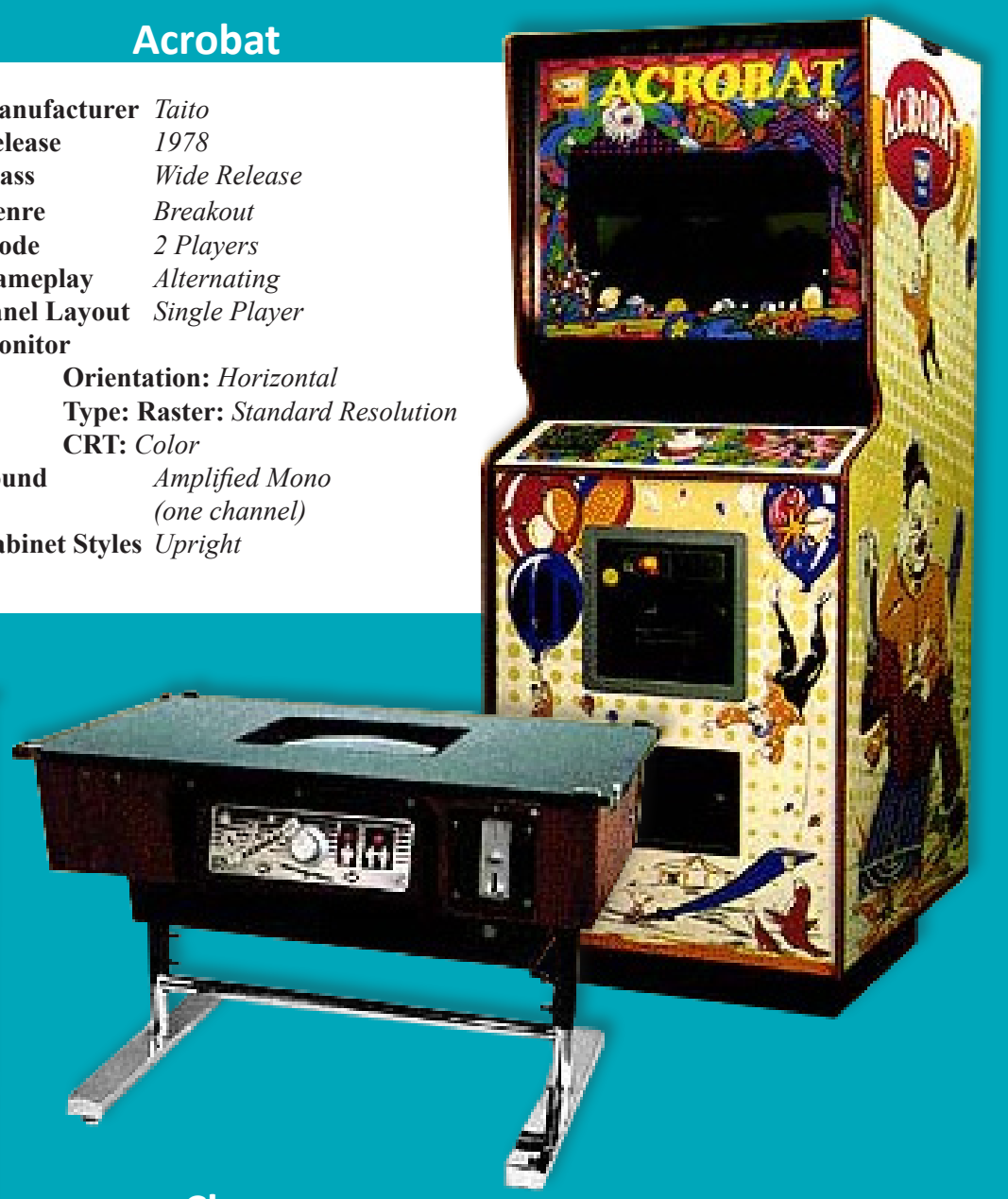
excerpt from the Cocktail Flyer:

- One or two player action
- Dual controls
- Adjustable jumps
- Adjustable pricing
- Bonus jump feature
- 19” solid state monitor
- Amusing musical sounds
- Micro Processor logic system
- Built-in ROM & RAM testor
- Handsome cabinet design



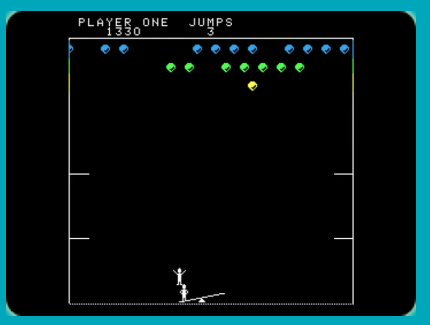
Acrobat

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Clowns

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

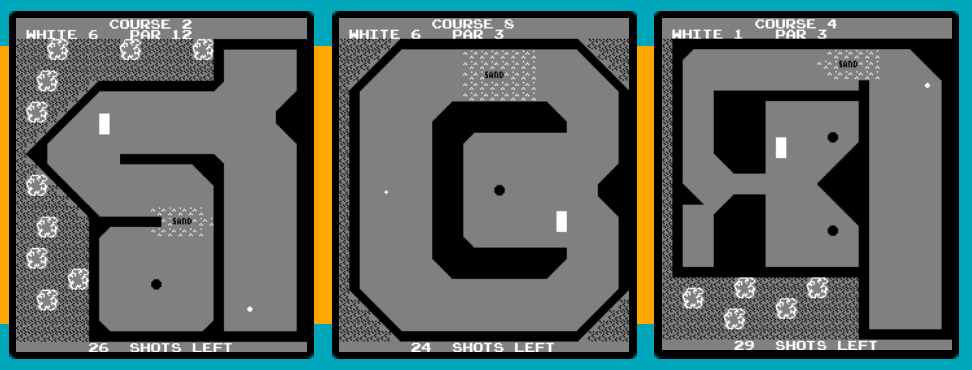


Atari Mini Golf

Manufacturer *Atari*
Release *1978*
Class *Prototype*
Genre *Sports*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Cabinet Styles *Upright*

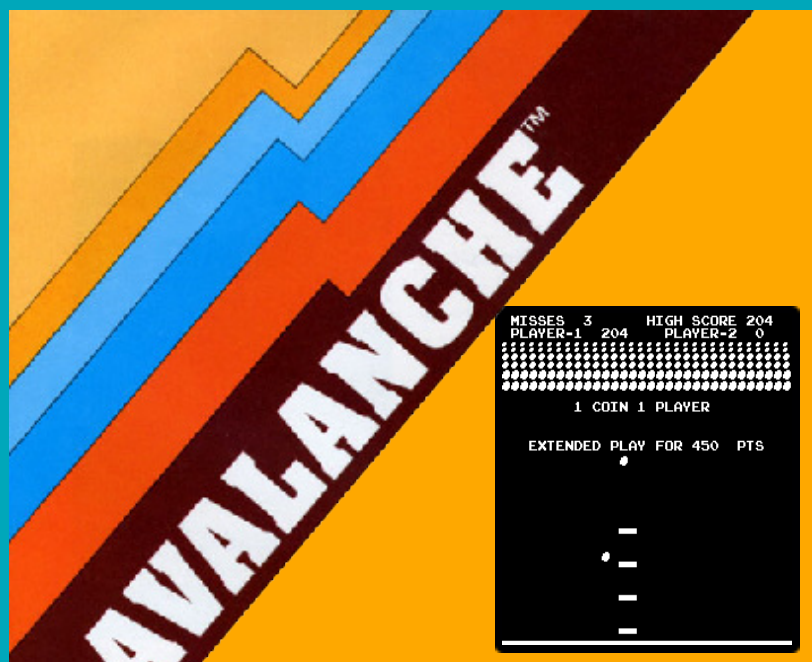
Atari Mini Golf is a black and white mini golf game.

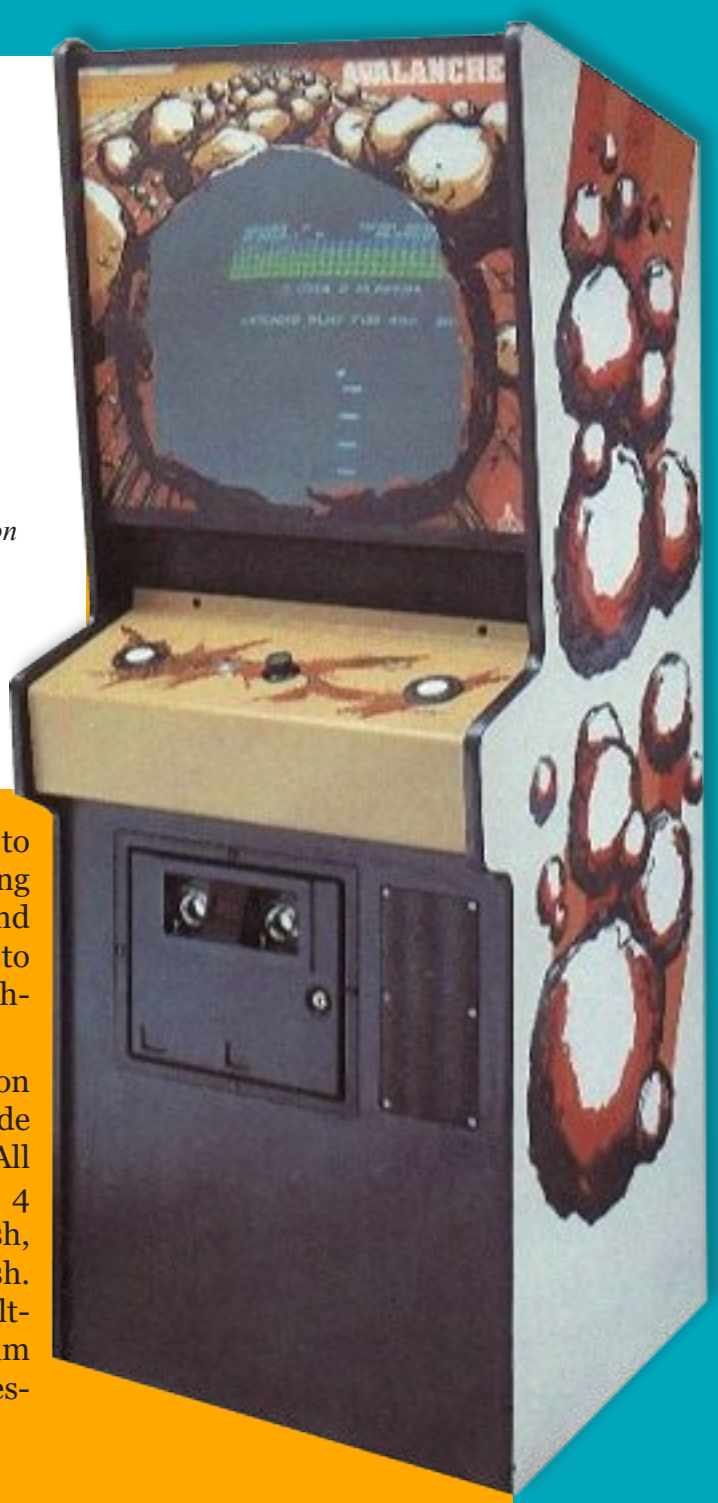
The game never made it out of its prototype state and was never released.



Avalanche

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Action*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *1 [Serve]*
Rotary: *Analog*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Multicolored Overlay*
Sound *Sound: Amplified Mono (one channel)*
Cabinet Styles *Upright*





Avalanche is an arcade game designed by Dennis Koble and released by Atari in 1978. The object is to catch falling rocks with a controllable set of paddles that diminish in number and size as the rocks fall faster and faster. The concept gained a much wider audience after Activision released an unauthorized adaptation in 1981 as Kaboom! for the Atari 2600.

Avalanche is for 1 or 2 players, with no simultaneous gameplay. There are six rows of rocks to deal with. The game starts with a six-storied platform and the player loses one platform per row of rocks cleared. The player scores points for those rocks they prevent from reaching the ground. The farther the row of rocks, the smaller and faster they become. The ultimate goal is to get enough points so that the player can continue the game should they lose their first one.

Avalanche is housed in a custom cabinet that includes 2 large lit start buttons and a rotary controller. The side art and bezel feature groupings of rocks with extending lines meant to convey the motion of falling rocks. The screen is black and white with two colored strips to provide colored rows of graphics as in Breakout.

The circuit board is based on the 6502 CPU, with game code stored in multiple ROMs. All game text is selectable to 4 different languages: English, French, German, or Spanish. Avalanche also includes a built-in self-test diagnostic program that displays all microprocessor and memory functions.

Barrier

VECTORBEAM A CINEMATRONICS COMPANY

BARRIER

Manufacturer	*Vectorbeam*
Release	*1978*
Class	*Wide Release*
Genre	*Maze*
Mode	*2 Players*
Gameplay	*Alternating*
Panel Layout	*Single Player*
Controls	
	Buttons: *Directional (up, down, left, right)*
Monitor	
	Orientation: *Vertical*
	Type: *Vector*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

In this very basic game, players move a small triangle around on the grid, while attempting to avoid the diamonds that are also moving around on the grid. Reaching the end of the grid teleports the player back to the front of the grid to gain points. The game is played on a 3x9 grid that is displayed at angle to make it appear to be in 3-D.

Barrier ran on the Cinematronics hardware platform, which also ran such games as “Warrior”, “Speed Freak”, and “Star Hawk”. It used a huge X-Y monitor that was almost entirely covered with a monitor bezel that only allowed the small triangular playfield to show through. Around 70 percent of the monitor’s total area was hidden from the player. The monitor was too large for the cabinet, it actually poked out through a notch in the back door. The control panel featured a Start button and four directional buttons, even though this title would have been better with a 4-Way joystick. The sideart shows a picture of a blue wizard who has the playfield of the game as his body, and the same wizard is repeated on the monitor bezel that blocks out most of the screen. This game had a metal marquee that did not light up. The marquee graphics were also repeated directly below the control panel.

“arcade-history.com”

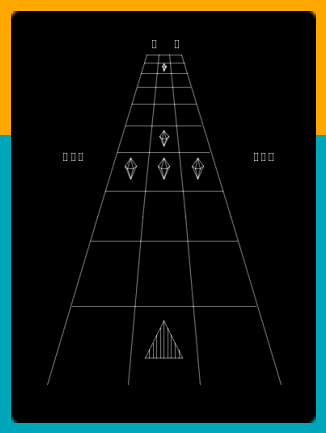
excerpt from the Flyer:

Avoid the forces of evading diamond shaped alien forces. Are they supernatural or intergalactic? No time to tell. A second’s hesitation means instant destruction. Each forward move scores a point for the good guy!...

The Features

- Patented Vectorbeam™ monitor system
- Coin accumulator circuit
- Low maintenance push button player controls
- Lasting player appeal for one or two players

Shipping Weight: 275 lb.
69 in x 25 in x 26-1/2 in
175 cm x 64 cm x 67 cm



Blasto

Manufacturer *UPL*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Blasto is a 1978 arcade game by Gremlin. The player controls a spaceship and have a limited time to clear a board full of mines. There is only one button, which shoots. If a mine explodes, its explosion can take out nearby mines, but also hit the players, sending them back to the starting position and costing time (but there are no "lives"; the only way to game over is to run out of time). Touching a mine will not hurt players. There is no level wrap; clearing a boundary and then going through will only keep players where they are on screen.

The World Champion for this game according to Twin Galaxies Official Electronic Scoreboard Bert Ankrom is the World Champion at the Blasto arcade game with a verified score of 8,730 points.

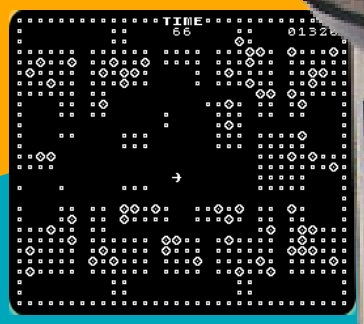
excerpt from the Flyer:

GAME ACTION:

SINGLE PLAYER CHALLENGE
You are in control of your spaceship as you maneuver it through a mine field. Beat the clock to explode all the mines and win a FREE game. High score indication brings them back for more.

TWO PLAYER FRENZY
With two players, BLASTO gets even more challenging, more exciting, as each one battles for the most mines and ultimately - for each OTHER! If there ever was a "cabinet rattler", this is it. That's why we put special care into making the controls rugged.

SKILL AND STRATEGY
BLASTO plays well at all skill levels. Beginners try to hit more 100 point mines than the opponent. Look for high chains of mines for high-scoring chain reactions! Advanced players use high speed maneuvering and firing for the 1000 point "kill" shot. Challenge and fun at all player levels are designed in for a long earning history.



1978
78

Block Fever

Manufacturer *Nintendo*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Cocktail*

Block Fever is a is a blatant Breakout clone that served as one of Nintendo's first video game releases. In the game players control a paddle and hit a ball back upwards to break the blocks above. Once all of the blocks have been destroyed, the players win that stage. Each stage has a different block formation. A version of Block Fever came with the Color TV Block Kusure video game.

The game is listed as "Block Fiber" on arcade-museum.com.

Block Game

Manufacturer *Konami*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*

In 1978 Konami created their first arcade machines: Block Game, which was a shameless copy of Atari's Breakout.

Cartoon Gun

Manufacturer *Sega/Gremlin*
Release *1977/1978*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Cartoon Gun, is a discrete logic arcade game released by Sega in 1977. It is a cartoonish shooting game with a positional rifle to shoot on-screen targets.

Blue Shark

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Gun: *Positional with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Blue Shark is an an undersea shooting game where the player uses a mounted spear gun to kill sea creatures that move across the screen. They have to shoot the sharks, swordfish and octopuses but try not to hit any of the skindivers.

excerpt from the Flyer:

Fascinating new deep sea hunt video game that challenges players to hit moving creature targets by firing an electronic spear gun. Realistic, three dimensional color background displays the underwater scene. Scoring is based on long or close firing range distances and type of creature 'speared': SHARK, OCTOPUS or SWORDFISH. Hitting skindiver subtracts points. Display of previous high score invites competition.

One free play is awarded for score of 18.000 points (operator adjustable).

SPECIFICATIONS

Height	1745mm
Width	650mm
Depth	900mm
Weight	101kg

Midway Version

Taito Version

Cascade is an Avalanche clone.

excerpt from the Flyer:

- 1 or 2 players
- The meteors fall randomly
- Increasing difficulty with time
- The display of the maximum score of the day stimulates emulation
- For language option
- Extended play option
- Self test
- "Cold" p.c. board for increased reliability

Cascade

Manufacturer *Sidam*
Release *1978*
Class *Wide Release*
Genre *Action*
Mode *2 Players*
Gameplay *Alternating*
Monitor
Orientation: *Horizontal*
CRT: *Black and White with a Color Overlay*
Cabinet Styles *Upright*

Computer Othello

Manufacturer *Nintendo*
Release *1978*
Class *Wide Release*
Genre *Puzzle*
Board pin *Nintendo Classic*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player Controls Differ*
Controls
Buttons: *5 [Green|Orange|Orange|Orange|Orange]*
Buttons: *5 [Blue|Blue|Purple|Purple|Red]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

Computer Othello was the first video game both published and developed by Nintendo, and the first game developed by Nintendo R&D1. While not the first video game Nintendo was involved with, it still makes its mark on history for the various reasons listed above. Computer Othello is a table top arcade game that was later released for retail with the release of Computer TV Game. The game was a computerized version of the board game Othello.

"nintendo.wikia.com"

Computer - R3

Manufacturer	*Universal*
Release	*1978*
Genre	*Puzzle*
Mode	*2 Players simultaneous*
Gameplay	*Competitive*
Panel Layout	*Multiple Player*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Color*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Cocktail*

Computer - R3 is a strategy game of Xs and Os. Players tries to fence in the opponent's pieces with their own pieces, one at a time-vertically, horizontally or diagonally. If their opponent's pieces cannot be fenced in, the player must pass. If the player fences in the opponent's pieces, they will become the player's pieces. The one who has the most pieces on the board after the game is finished is the winner.

excerpt from the Flyer:

THE RULES OF THE GAME

The game is a battle between O and X.

The object is to use your own pieces one at a time to fence in the pieces of your opponent - horizontally, vertically or diagonally. When you can't fence in your opponent's pieces, you have to pass.

When you successfully fence in your opponent's those pieces become your own. When the game is finished, the winner is one with the most pieces on the board.

HOW TO PLAY THE GAME

First, insert 50¢ coin.

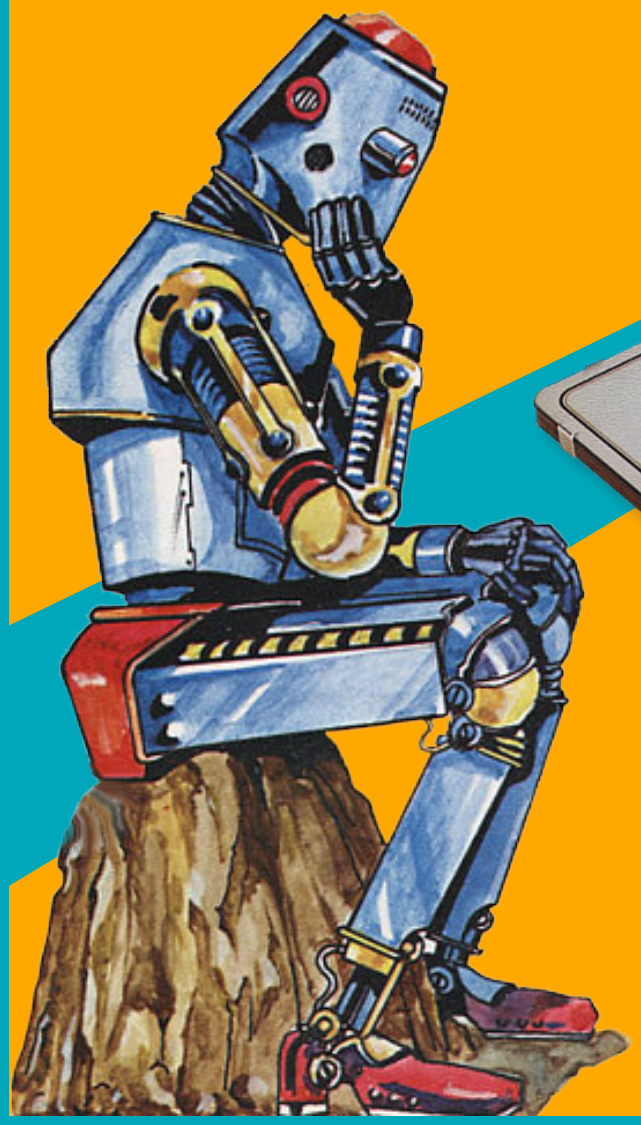
Next, depress the select button and indicate whether you want to play alone or with a friend. If you are playing alone, the computer has the first move (O). If you are playing with a friend, the first move goes to the player on the opposite side of where the coin is dropped in.

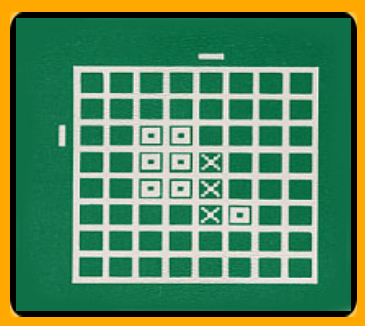
Depress the "right arrow" or "up arrow" button and decide where you will put your first piece. When the set button is depressed, the piece will automatically be set in the position you have designated.

If you cannot fence in your opponent's pieces, depress the pass button. The game can be played until the timer reaches '0'. If it reaches '0' before the game has finished, simply drop in another coin and the game can be continued.

If you finish the game before the timer returns to '0', depress the reset button, select the game, and keep playing until the time is up.

When all of the pieces have been set in the squares and the game is finished, depress the identification button.





Playing with a friend...

Playing alone...

Dawn Patrol

Manufacturer *Mirco*
Release *1978*
Class *Wide Release*
Genre *Action*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Upright: *X/Y-directional yoke with trigger*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

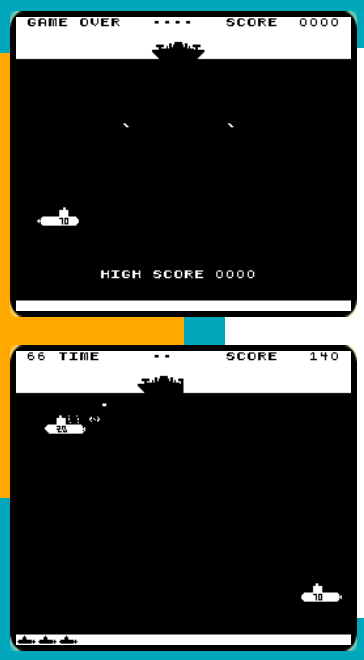
excerpt from the Flyer:

Out of the sun they come. If either of them line up one you, it's curtain for the...
Dawn Patrol!

MICRO Games puts you in the cockpit with this new, excitingly different electronic "dog-fight". The action is so real, it's hard to resist. Players try again and again to pit their skill against the deadly enemy aces. Sometimes they lose - but you always win. "Dawn Patrol's" high appeal makes you the winner over and over again. It's compact arcade styling attractions attention, fits easily into a 60" x 28" x 24" space. Here's your chance to add new fun, new excitement, and new profit to your business!

Depth Bomb is a Sega licensed version of Gremlin's Depth Charge.

As in Depth Charge, players moves a ship at the top of the screen left and right while dropping depthcharges on the submarines below to destroy them.

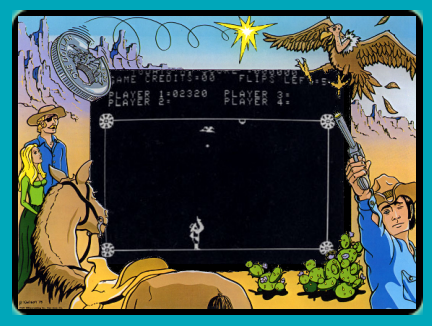


Depth Bomb

Manufacturer *Sega*
Release *1978*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Dead Eye

Manufacturer	*Meadows*
Release	*1978*
Class	*Wide Release*
Genre	*Shooter*
Mode	*4 Players*
Gameplay	*Alternating*
Panel Layout	*Single Player*
Controls	
Rotary:	*Analog*
Buttons:	*1 [Shoot Coin]*
Monitor	
Orientation:	*Horizontal*
Type: Raster:	*Standard Resolution*
CRT:	*Color*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*



excerpt from the Flyer:

Happy Trails Lead to Meadows DEAD EYE

Follow that Happy Trail from your distributor to your locations with MEADOWS DEAD EYE.

DEAD EYE is an exciting 1, 2, 3 or 4 player video game in which players compete for high scores. It is a simple game to play, but is a challenging game to master.

Players Come Back to DEAD EYE

An exciting and challenging game always brings the players back for more and more enjoyment. For you, the operator, that means higher collections. Repeat play means repeat quarters for both you and your locations.

How to Play Meadows DEAD EYE

After coin(s) are inserted, each player presses the PLAYERS button before starting the game. The player then presses and releases the FLIP COIN button. Once the coin is flipped into the air, the FLIP COIN button becomes the SHOOT COIN button. The player then must keep the COIN in the air by hitting the COIN and shooting at various targets and a random appearing BUZZARD which awards 1,000 points when hit.

Besides the player-controlled SHOOT BUTTON, which if held in, gives the player a rapid shot option, the player controls the DEAD EYE figure on the bottom of the screen. The DEAD EYE figure can be moved from side to side in order to maximize the player's control in aiming for the coin. Top scores are awarded when the DEAD EYE shoots the COIN into the four spinning wheels located in the corners of the play area.

The player's turn is over once the coin hits the ground (accompanied by sound) and NEXT SHOOTER then appears on the screen. GAME OVER is displayed at the end of each game.

DEAD EYE sounds simple and is simple to play but the key to the game is that the player must have a real skill in order to achieve higher and higher scores.

Scoring

By skillfully controlling both the DEAD EYE control and the SHOOT GUN button, the player can achieve high scores. The target values are as follows:
Shooting coin - 5 points
Shooting small bird - 50 points
Hitting top border with coin - 100 points
Hitting side border with coin - 500 points
Shooting random buzzard - 1000 points
Hitting top wheels with coin - 2000 points
Hitting bottom wheels with coin - 4000 points

Dog Patch

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Rotary: *Analog*
Buttons: *1 [Shoot]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Dog Patch is a shooter where hillbillies shoot their shotguns at tin cans that are tossed into the air. There is a bonus round where a wild goose can be shot for bonus points.

excerpt from the Flyer:

A one or two player game of marksmanship, in which players shoot at cans tossed into the air for high score and bonus points

• One player vs. computer • Games adjustable to 10, 15, 20, 25 cans • Extended play - 3 or 5 cans • Realistic sounds • Handsome “down-home” cabinet graphics • Flexible game pricing • Twin 25¢ coin chutes • 23 inch solid state monitor • Dependable micro processor system • Built in ROM and RAM tester • Size: Height 67” (170 cm), Width 26” (66 cm), Depth 24” (61 cm). • Shipping weight 300 lbs.

Double Break

Manufacturer *Science Engineering*
Release *1978*
Class *Wide Release*
Genre *Ball and Paddle*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

Extra Inning

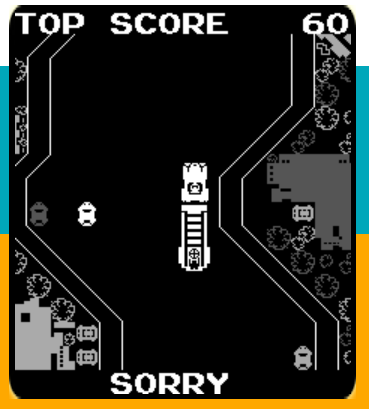
Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Sports*
Hardware *Midway 8080*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *8-way [Move|Fast Ball]*
Buttons: *2 [Swing|Slow Ball/Curve]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *No Audio*
Cabinet Styles *Upright*

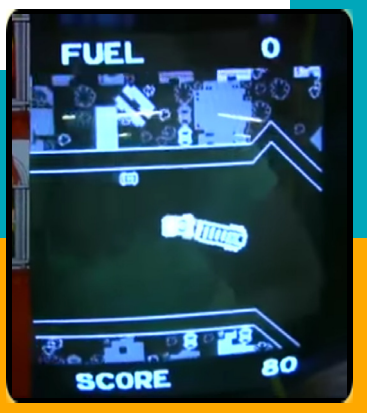
Extra Inning is a baseball arcade game which was released by Midway Games in 1978; it utilizes an Intel 8080 microprocessor running at 1.9968 MHz, and is the third title in the Midway Baseball series. It is fundamentally the same as its predecessor, Double Play (released in the previous year), only the pitching player's joystick is back to being an 8-way one (although the outfielders' control is still rotary) - and an eponymous "extra inning" bonus will also be awarded when the players hit safely to all fields marked with the six letters of the manufacturer's name (indicated by their size increase in the bottom-left corner of the monitor). The number of innings players will receive for one coin again depends on how the cabinet is set, but if it's less than nine, players will once again have to insert another coin to continue.

"strategywiki.org"

Fire Truck

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Racing*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player Controls Differ*
Controls
First Player: *[Steering Wheel|Track Select|Horn|Accelerator]*
Second Player: *[Steering Wheel|Track Select|Bell]*
Monitor
Orientation: *Vertical*
Type: *TV Monitor*
CRT: *Black and White 23-Inch, Motorola or Tec*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Environmental Cockpit*





Fire Truck is a black-and-white 1978 arcade game. According to GamesRadar, it was the earliest video game with cooperative gameplay where two players were forced to work together. A one-player version of the game, called Smokey Joe was also released. This was internally identical to Fire Truck.

Fire Truck is built on the technology created for Atari's Super Bug released the previous year. Both games were programmed by Howard Delman.

While there is no real "goal" to the game, Fire Truck is considered to be a "racing game" where the two players must cooperate to drive the truck through traffic as far as possible without crashing. While the game can be played with one player, it was clearly meant to be played with two.

excerpt from the Manual:

Atari has added a new dimension to the video game world with the first "cooperartive" driving game for one or two players - Fire Truck™. A set assembly and an upright cabinet connected together make up the game. Each assembly contains a player control panel. The front cab and the back trailer of the hook-and-ladder firetruck are steered individually, unless it is a one-player game, in which case the computer controls one half of the truck (either the front or the back).

In a two-player game, one person sits and drives the cab via the cabinet steering wheel. The second player stands and drives the trailer via the back steering wheel (which is part of the seat assembly). The object of the game is to accumulate a high score by steering the fire truck through the course without crashing, or crashing as little as possible.

A 23-inch TV monitor is mounted in the top of the upright cabinet, with the monitor viewing screen tilted slightly back from a vertical position. Player-operated controls are mounted directly below the TV monitor on the front of the upright cabinet, and on the back top of the seat assembly.

Two identical coin mechanisms are mounted on the lower front center of the seat assembly, below the player controls. Either of the two mechanisms can initiate play. The cash box is located behind a locked access door below the coin mechanisms.

excerpt from the Flyer:

Atari's first "cooperative" game.

Fire Truck™ is a completely *new* video game concept. For the first time 2 players must "cooperate", to achieve highest score.

An Irresistible replay challenge.

Two drivers work as a team to control a hook-and-ladder fire engine. One player drives the cab, the other steers the trailer simulating the excitement of an actual fire chase. The constantly moving city street, the challenge of keeping the cab and trailer driving together provide new thrills every time the game is played, as drivers race the clock to cover as much distance as possible.

Quick reflexes for *both* players are a must to avoid crashing into curbs, oil slicks and other obstacles and losing time.

Two different 1-player games.

A single player can choose to drive *either* the cab or the trailer. In this mode, the computer takes over as the alternative driving partner.

New Operator Options.

Extended Play can be set for liberal, medium or conservative points for each of four game times.

Game time is adjustable to 60, 90, 120 or 150 seconds.

Coinage: 16 coin modes including 1 or 2 players per coin, 2 coins per play, or free play for display or demonstration.

Four Languages: Operators may select English, French, German or Spanish video message presentation.

Built to take it.

Durastress™ tested solid state electronics, durable construc-

Smokey Joe

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Racing*
Hardware *Atari B&W Raster*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
- **Steering:** *Wheel*
- **Buttons:** *1 [Horn]*
- **Pedals:** *1 [Accelerator]*

Monitor
- **Orientation:** *Vertical*
- **Type: Raster:** *Standard Resolution*
- **CRT:** *Black and White 23-inch, Motorola or Tec*

Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Smokey Joe is a one player version of Fire Truck.

excerpt from the Flyer:

New one-player version of the profit-proven Fire Truck™ in a versatile new compact cabinet. Exciting hook and ladder fire chase driving action. Unpredictable tracks. Players choose to drive either cab or trailer "cooperating" with the computer as alternate driving partner.

Football

Manufacturer *Exidy*
Release *1978*
Genre *Sports*
Cabinet Styles *Upright*

excerpt from the Flyer:

All The Excitement Of The World's Most Popular Sport

- Authentic sound effects
- Unique "palmball" control
- Steal ball from opposing team
- Operator adjustable playing time
- Pass or kick ball from 12 positions
- 1 year logic board warranty

Frogs

Manufacturer *UPL*
Release *1978*
Class *Wide Release*
Genre *Platformer*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up-left, down-left, up-right, down-right)*
Buttons: *1 [Tongue]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

excerpt from the Flyer:

Game Action: Always Hopping
Make the frog jump to catch as many insects as possible during game time. A single joystick control allows you to position the frog on his lily pad for the best possible shots. But watch out! If the frog lands in the water, you lose precious time until he reappears. Skillfully control the frog's tongue to snare as many targets as possible.

Free Play Option:
During the last few seconds of play, a dragonfly appears. If you catch the dragonfly, you win a FREE game! But it's not easy! Just when you think you've got him, he may dart out of range! All players have a good chance for this BONUS!

More Challenge, More Appeal!
As the player's score increases, more insects appear on the screen. This makes game play exciting for any player! And, FROGS is one of the first videos that really attracts the women players as well as men. High Score is continually displayed to invite competition.

Sounds Captured Alive!
FROGS sounds as great as it plays. Every action provokes a sound sensation.

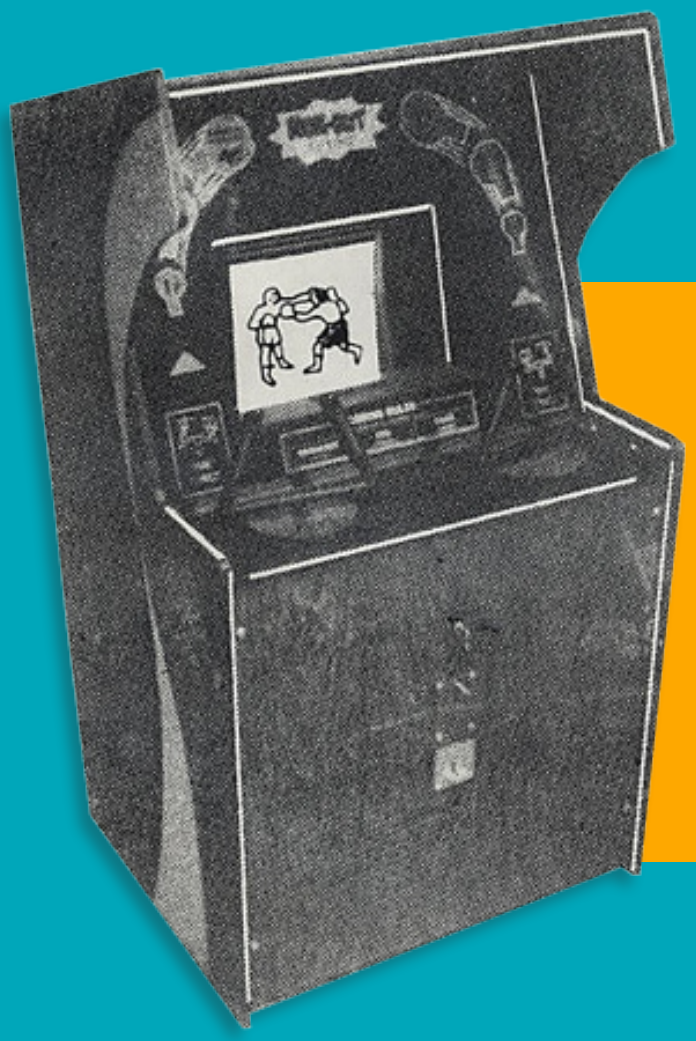
Galaxy War

Manufacturer *Sega*
Release *1978*
Genre *Shooter*
Board pin *Discrete logic*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

GALAXY WAR

Galaxy War is a lightgun shooting game set in space for two players using two large rifle-like peripherals and the screen positioned at quite a distance. It is similar in design an earlier SEGA game Bullet Mark.

"mobygames.com"



excerpt from the Flyer:

Introducing a New Concept to the Coin Operated Game Industry

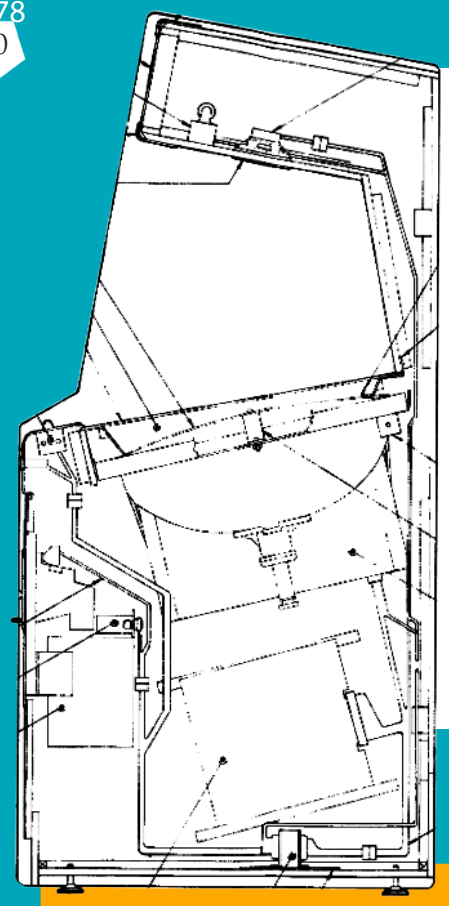
- Two player game
- Each player has total control of his boxer
  - Player selects left and right punches
  - Able to move boxer around ring
- Boxers appear on screen in true-to-life like images, totaly animated, and in full color
- Actual knockdowns appear on the screen

A knockdown will occur when either boxer is hit 15 times (in the head). On third knockdown a KNOCK-OUT will occur (boxer will remain in a down position

Nok-Out Boxing

Manufacturer *Gamex Amusements, Inc.*
Release *1978*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Gee Bee

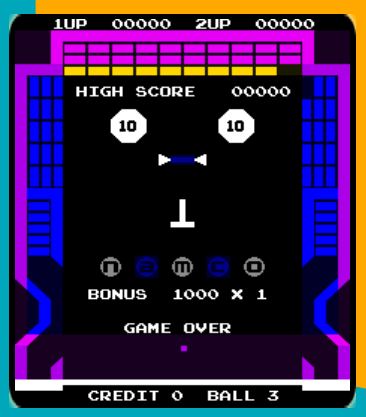


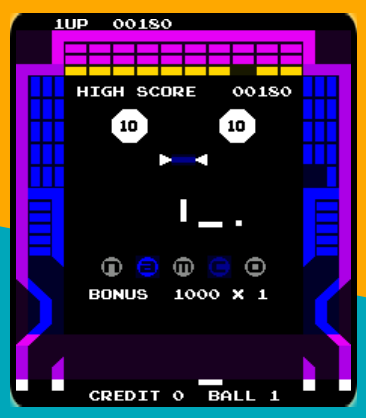
Manufacturer *Namco*
Release *1978*
Class *Wide Release*
Genre *Pinball*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Gee Bee is a ball & paddle game released in 1978 by Namco and designed by Toru Iwatani. It is Namco's first video arcade game and was released in the United States by Gremlin. Gee Bee was originally meant to be a game that women could play; however, Pac-Man would later use this idea as well, and the game originated from Iwatani wanting to make pinball machines, with Namco declining the idea. Gee Bee is considered one of the rarest arcade games ever made due to its poor sales and increasing popularity of games like Space Invaders and Asteroids. Gee Bee received two sequels in 1979, Bomb Bee and Cutie Q, which would later go on to be included in the Japanese release of Namco Museum Volume 2 in 1995.

"namco.wikia.com"

The game combines Breakout with pinball machines (as mentioned above). Like many other Pong/Breakout games, the player uses the rotary knob to control the set of paddles on-screen. The player simply hits the ball back and forth at the bricks. Many pinball-esque features are presented, including spinners, roll-overs, pop bumpers and score multipliers. Gee Bee used strips of colored cellophane (used in cookie boxes), which many 1970s games used before Namco's own Galaxian in 1979, which used real RGB color.





Sega Version

Namco Version

excerpt from the flyer:

BLOCKBUSTING FUN!
All the extras in GEE BEE add to the fun and test your skill! There are two bumpers, five rollovers and a spinner to aim for. If you light all five rollovers, your bonus is doubled. When all the left or right side blocks are knocked out, a safety gate appears to prevent the ball from leaving through the side gate. In addition, you have a chance for an extra ball if the left or right pocket blocks are knocked out. Try for a free credit by knocking out both sides of the pocket blocks! A free game option, operator adjustable, is available.

Plus, GEE BEE's sounds and colorful graphics accent the game play all the way! Players will go for more than one game of GEE BEE! It's irresistible!

GAME ACTION:
Player appeal is assured with GEE BEE: For one or two players, GEE BEE offers the best of video and pinball in one! The game accepts up to 9 credits, and is operator adjustable for 3 or 5 balls per game. Just push the serve button and get ready for new video excitement! Keep the ball bouncing around the screen to knock out as many point blocks as possible. The inner rows of blocks score more points than the outer rows. Aim for the higher points values! And, to add to the challenge, the ball speed varies depending on how many hits you make. As the tempo builds, you really have to be fast!

SELF-TEST MODE:
At the flick of a switch, the game runs through a complete self test, and lets you know immediately that the game is in good condition. It also shows you where to look if a problem should occur. A great trouble-shooting aid!

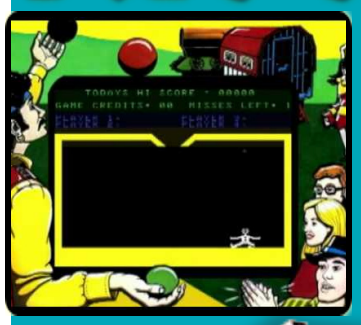
EASILY ADJUSTABLE OPTIONS:
Select any options YOU desire simply by setting a few switches! Adjust: Number of balls per game; Number of coins per game; Free game score; No-Free-Play option, also.

SPECIFICATIONS:
Solid-State b/w monitor; 100VAC, 115,230; 50/60Hz; 3-wire cord with safety interlock on game access door; grounding required.

Gypsy Juggler

Manufacturer *Meadows*
Release *1978*
Class *Wide Release*
Genre *Skill*
Board pin *Gypsy Juggler Dipswitch*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Buttons: *1 [Add Egg]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

GYPSY JUGGLER



Taito Version

Meadows Version

Gypsy Juggler is a spinoff, or copy, of Exidy's Circus. The game uses otedama as a motif. In the game, players control a Gypsy who juggles eggs. The number of eggs juggled have different point values: one egg is worth 5 points two eggs, 50 points three eggs, 100 points and four eggs, 200 points.

"arcade-museum.com"

excerpt from the flyer:

HOW TO GET YOUR JUGGLING ACT TOGETHER. If you can find reverse in a VW, scramble an egg, or stumble into a bathroom light-switch in the dark, you too can juggle.

DON'T BE A SPECTATOR. Meadows takes this centuries old performers' art off the stage and passes it onto the players of the world. This is one form of insanity we feel everyone has a right to experience. The skill involved in getting 1, 2, 3, 4 objects to dance around your hands has always held that small sense of magic.

1 TO 4 PLAYERS. Players can compete for high score against opponents or against themselves. High skill factor makes Gypsy Juggler tough to master and invites replay for higher scores.

HOW TO PLAY GYPSY JUGGLER. After coin(s) are inserted (accompanied with sound), each player presses PLAYERS button *before* dropping first egg to be juggled. Each player's score area is flashed up with zeros (5 figure value) to sound effects.

ADD-ANOTHER-EGG. Your first egg is served to the juggler from the overhead chute by pressing ADD-ANOTHER-EGG button. You've got the first step mastered, now add additional eggs and watch your score "zoom" up.

SCORE. 1 egg = 5 points; 2 eggs = 50 points; 3 eggs = 100 points; 4 eggs = 200 points. *No points for bouncing off head!* Eggs hit on fingertips arc wide; hits closer to the head are more controlled, building your skills.

PEEP-PEEP-PEEP. You just missed (dropped an egg) and a chicken pops out of the egg and exits off the screen in the shortest direction with "peeping" sounds. Next player (written on TV) and next player's score flashes indicating which player up.

EXTENDED PLAY. Operator adjustable at 5,000; 15,000; 35,000. Tells players when extended play reached by sound and written 2 places on screen.

Pro Racer

Manufacturer *Sega*
Release *1978*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

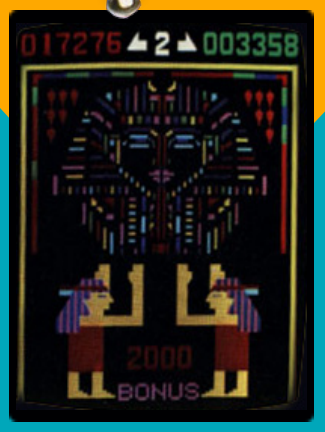
Pro-Racer is a discrete logic arcade racing game released by Sega during August 1978.

Dimensions: 68 x 90 x 170 cm.
Weight: 115 kg.

Pyramid

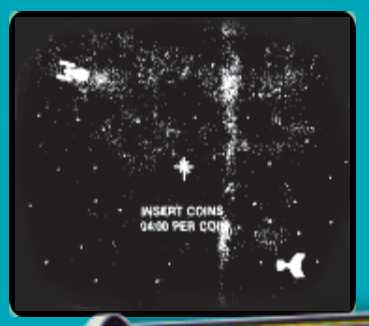
Manufacturer *Sankyo*
Release *1978*
Genre *Ball and paddle*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Pyramid is a colorful ball and paddle game with an Egyptian motif sold in Japan.



Orbit

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Space*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Stereo (two channel)*
Cabinet Styles *Upright*



Two players. Each player controls their spaceship (shaped like the Star Trek Enterprise and Klingon ships) trying to destroy each other's ship. One hit will either partially or completely destroy the others ship. If partially, and space stations are selected you can repair and rearm your ship to go back for revenge. This game is timed so there is no limit on the number of ships you can have.

Orbit was designed and programmed by Owen Rubin. Rubin was basically asked to knock off Steve Russell's 'Spacewar!' in RASTER for the European market in just 6 to 8 weeks, it was done quickly and there are small mistakes. Rubin should have made the shots bigger for example, and the space stations could have had better graphics. But for a raster version of an original vector game in those days, Atari hit it fairly well.

There was 2 versions, a large upright cabinet (that may never have been shipped) and the smaller one with the long row of buttons. Atari did a very advanced version in the larger cabinet that had an electronic touch pad and lots of LEDs to indicate which options were selected, with a different type of buttons from the small cabinet. It was a large cabinet with the touch pad over the monitor. The stereo sound placed the sound where the objects were on the screen.

Rubin also changed the option buttons to always work because he hated that in 'Spacewar!', once players picked the game and options, they were stuck with them for the entire game. If players bought and were playing a 15 minute game, it was a long time to realize they should not have picked negative gravity! Also, Rubin needed to add something to the game to make it different (in addition to the switchable options), so the idea of getting new fuel, shots, and repairs from Space Stations seemed like a good idea at the time. It did not work as well as Rubin thought it would. That is why they are an option.

An interesting note on Orbit was that the space stations actually DO orbit the sun, they are not on tracks. Rubin gave them an initial hit of velocity at the

start of each wave and the gravity routines do the rest (they ignore negative gravity, because the first time players selected it, they would fly off the screen). To test the gravity routines, on the bench Rubin put the space stations into orbit around the sun, and just let it run for days. Several days later, they were still in orbit, but degraded a bit and a bit more elliptical. They finally lost orbit a few days later. Not that Rubin needed to do this, he could have put them on tracks, but he wanted his 8 bit gravity math to work as well as possible all the other time.

Present in the same graphics ROM as the object graphics, these initials (L.R., O.R., L.Y., M.H., and P.M.) are those of people who worked at Atari's early arcade days: Lyle Rains, Owen Rubin, (unknown who L.Y. is), Morgan Hoff, and Paul Mancuso.

According to Rubin, the initials would be displayed if a special sequence was entered on the game's number pad. Unfortunately, close examination of the game's code reveals that this sequence is no longer present. Given that Atari had a thing against crediting their game programmers/designers/etc., it's very possible they discovered the code and removed it rather than erase the initials, figuring that there would be absolutely no other way consumers would be able to see these.

"arcade-history.com"

excerpt from the flyer:

Space action. The ultimate frontier.
New Orbit™ is the ultimate space action adventure game. More research proven features offer more new challenges, encourage players to accumulate more game time. And offer operators unlimited profit potential.

Orbit's new compact cabinet design also offers higher per square-foot earnings potential in both street and arcade type locations.

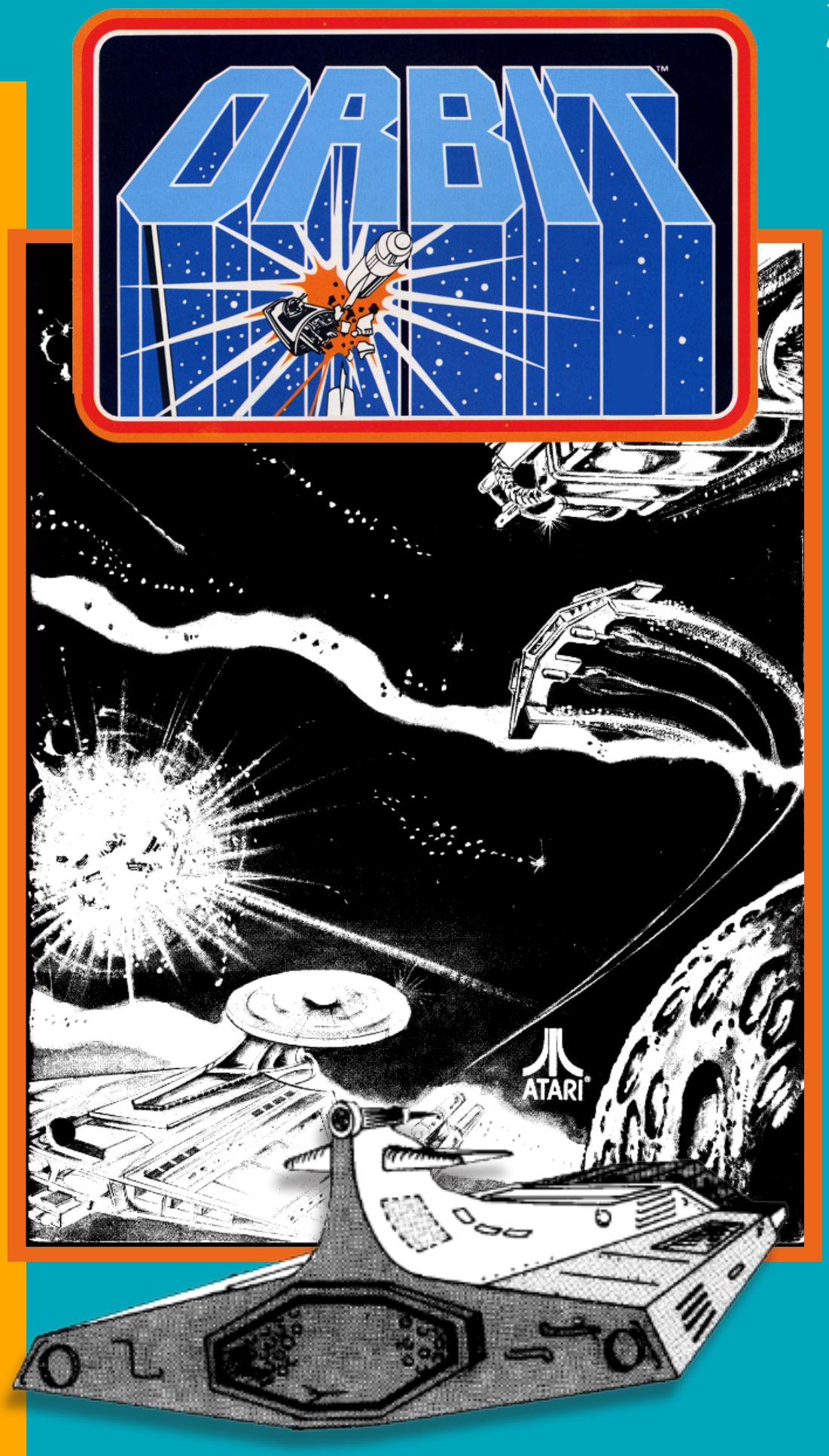
More variety. More strategy. More action.
Easy to read, reliable push-buttons let players select *10 different game levels* from "Beginner" to "Intermediate" to "Expert" to "Super Expert".

Players also can select *8 different game feature variations* that can be *added* or *deleted* while the game is in progress.

"Fuel", "Shots Remaining", and "Time Remaining" are displayed on the screen to add to the excitement and suspense. More ways to score hits and points.

Dimensions.

Height: 59", 150 cm.	Width: 25", 64 cm.
Depth: 28", 71 cm.	Monitor: 23" B/W



Scramble

Manufacturer *Vectorbeam*
Release *1978*
Class *Wide Release*
Genre *Sports*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*

Scramble is a competetive, pinball-like black and white vector game.

excerpt from the flyer:

Exciting two-ball challenge
Extended play feature
Choice of playing computer or another opponent
Revolutionary vectorbeam monitor

Secret Base

Manufacturer *Sega*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Hardware *Discrete logic*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Playe*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Secret Base is a flying/shooting game for one or two players where the objective is to destroy the enemy missile base with their bomber.

excerpt from the flyer:

Make perilous bombing runs amidst enemy missile and antiaircraft fore to destroy the “Secret Base” hidden deep in the bottom of a mountain.

A 1 or 2 player game in which the player experiences the thrills and perils of attempting to destroy and enemy missile base (red target) with rocket fire from his bomber. Players pulls the joy stick forward to climb and pushes back to descend. Bombs are released by depressing the firing button.

Attack at low altitudes to increase the explosive force of the rockets but you also run higher risks of being hit by enemy fire. High technique is required to drive down, make the strike and zoom up out of the danger area as missiles and rockets explode at random within the air space indicated by the dotted line.

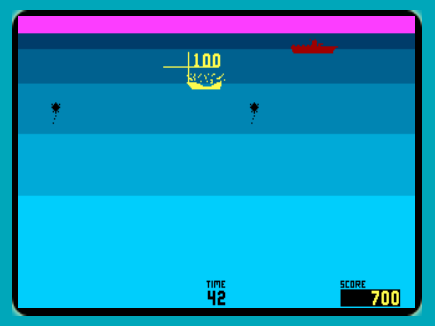
Craters open up each time a hit is made and the entire base explodes with a thunderous roar when a rocket finally penetrates to the “Secret Base”.

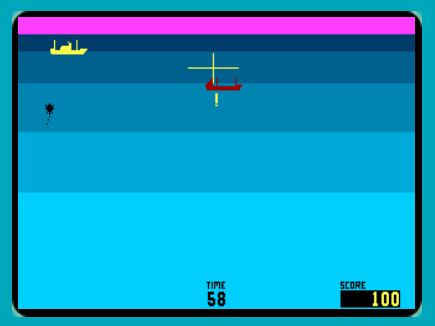
Sea Wolf II was the first game to run on Midway's then-new Astrocade hardware (a Zilog Z80 running at 1.789773 MHz, with a Bally Astrocade sound chip running at that same speed), and, as the name suggests, it's the sequel to Sea Wolf which had been released two years earlier. The gameplay is fundamentally the same as that for its predecessor - the players (two can play simultaneously this time), must use two "periscopes" to take control for two virtual submarines, with a single button to make them fire torpedoes at the various enemy ships which are passing across the surface of the ocean (at the top of the screen). The torpedoes are launched from the bottom of the screen and will move upwards to hit the enemy ships (but may get blocked by the mines floating at different depths of the ocean); both of those submarines can fire five torpedoes before they automatically reload (as in that original game cabinet, two of the transparencies inside both of the periscopes were a display of remaining torpedoes and a red reload light). The game will be extended (for both players) if either one reaches a certain point amount before the timer runs out, depending on what the arcade owner has set it to, and can display on-screen text in four different languages (English, French, German and Spanish) - and like the original it was later ported to the Commodore 64 system in 1983 along with the Atari 800. It's also described as "the ultimate video game" on the promotional flyer given that it was released before the advent of Pac-Man, and may also have been the first arcade title to make extensive use of colour (after some older games had made limited use of it, including Atari's Sprint 8, released in 1977 and being the first title from that company to allow up to eight players to play simultaneously - and upon the same cabinet as well).

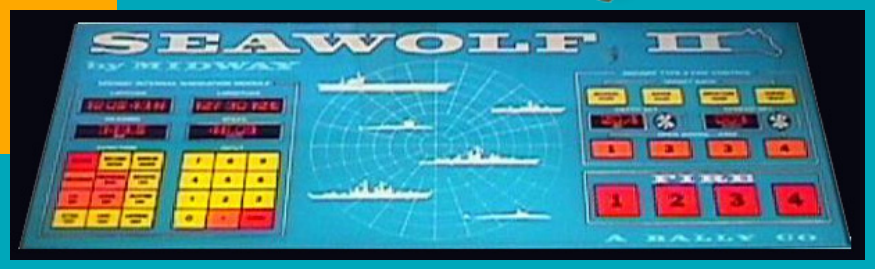
"strategywiki.org"

Sea Wolf II

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Controls
Periscope with button [Fire]
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*







Seesaw Jump

Manufacturer *Sega*
Release *1978*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Seesaw Jump is an arcade game released by Sega in 1978. It is a re-worked version of Circus, a 1977 arcade game by Exidy (licensed to Sega) and was released exclusively to a Japanese audience.

In the game, players has two men jump up and down on a seesaw breaking balloons at the top of the screen.

The T2 cocktail version has an adjustable difficulty factor.

Seesaw Jump (T2)

Shark Treasure

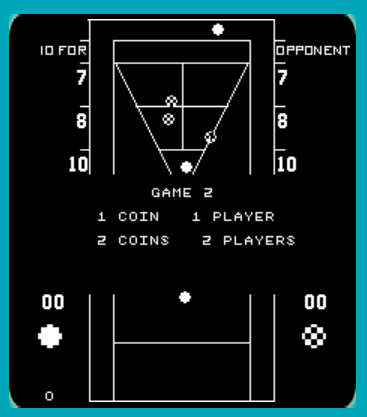
Manufacturer *Universal*
Release *1978*
Genre *xxx*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

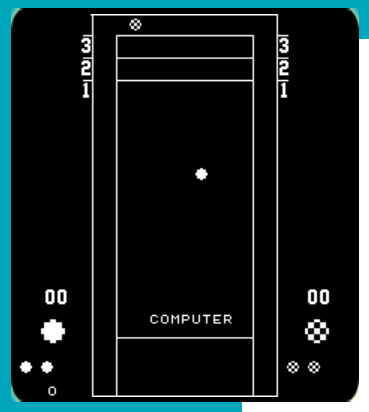
SHARK TREASURE

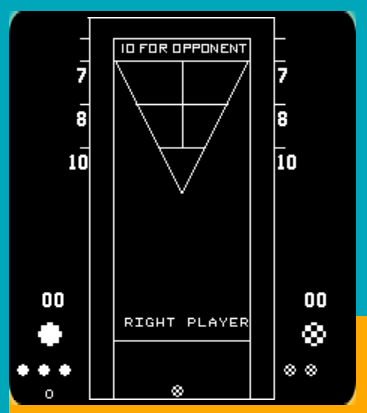
The player controls a diver who must recover sunken treasure chests at the bottom of the sea while killing or avoiding hungry sharks. A treasure chest containing a moray eel must also be avoided. Every correct treasure chest must be taken to the ship after being recovered.

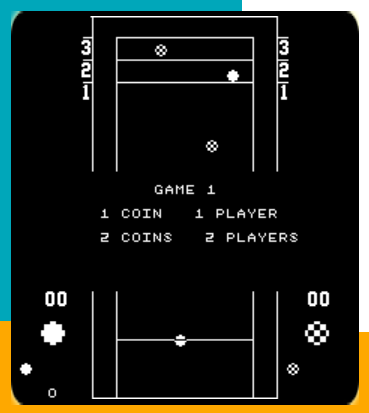
excerpt from the flyer:

Can you safely return to your ship with the pirate's treasure which is hidden deep in the sea where sharks thrive?









Shuffleboard

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Sports*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Trackball: *Optical*
Buttons: *1 [Select Game]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Shuffleboard runs upon an Intel 8080 microprocessor (running at 1.9968 MHz), and the players must use a trackball for puck control (with a single button to switch between two variations at the start of the game). It was one of the first games to use a trackball, and like M-4 before it, was developed by Arcade Engineering for Midway - and the pucks on the right (first) player's side are checkered while those on the left (second) player's side are white (and, if only one person is playing, the role of the second player is taken by the CPU). Where the pucks land on the board determines the amount of points players receive (1 to 3 in "Game 1" and 7 to 10 in "Game 2"), and whoever has the highest score at the end of the game is declared the winner; meaning that if the CPU has a higher score than the player at the end of a 1-player match it will have beaten him. Also, if players roll too far in Game 2 the puck will land in "10 FOR OPPONENT".

"strategywiki.org"

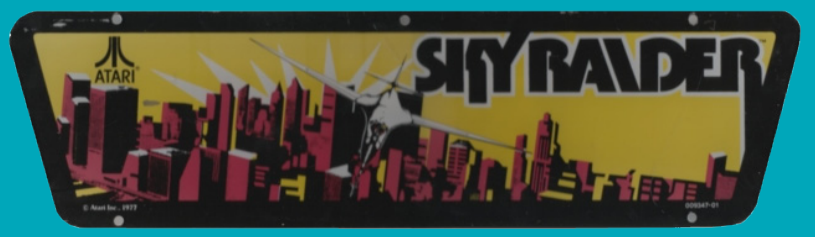
excerpt from the flyer:

2 Games In 1 For Double The Profits & Double The Fun!

• Compete With 'Computer Brain' Or Another Player
• Big Rolling Ball Controls Position, Speed and Direction of Puck

Here's a proven winner for a small space. CRUISE SHUFFLE or TABLE SHUFFLE on a big 23" monitor. Real excitement for competition with the computer puck or in tournaments among players. SHUFFLEBOARD offers 4 adjustable scoring levels with an optional game time switch. It has a built in ROM-RAM tester - easy to service.

Sky Raider



Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Hardware *Atari BW Raster*
Board pin *Sky Raider Dipswitch Settings*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Steering: *X/Y-directional yoke with common thumb buttons [Fire]*
Buttons: *1 [Cone]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a red overlay.*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Sky Raider is a vertical scrolling shooter arcade game, that got released by Atari in 1978; it utilizes a Motorola M6502 microprocessor (running at 1.005 MHz).

Players pilot an aircraft and destroy strategic targets as you fly over the enemy territory. The targets include oil fields, electrical towers, bridges and enemy aircraft, which look like commercial airliners. The object is to hit as many targets as possible within the time allowed.

The enemy does not fire at the players. The steering controls the speed of the aircraft as well as the crosshairs players use to target the enemy. Each target is worth a different amount of points with the enemy plane worth the most due to the difficulty in destroying it since it is moving toward players and under their aircraft.

Some of the Atari games made around 1977-1978 used similar cabinets and steering yoke, but steering movement, cabinet colors were different. Example would be Starship I. These cabinets were unique due to the entire marquee, plexiglass, speakers were all together on one huge plastic frame that connected on to the top of the game and also the control panel went in the middle of it towards the bottom, which fastened the frame to the bottom.

“arcade-museum.com”

excerpt from the Manual:

Sky Raider™ is a one-player jet-fighter game developed by Atari. The game is contained in an upright cabinet which is illustrated with brightly colored graphics to enhance player appeal. A 23-inch black-and-white TV monitor is mounted in the cabinet, with the image reflected by a half-silvered mirror.

excerpt from the flyer:

Sky Raider is an all new idea in video action strategy games. Three-dimensional visual effects and realistic sound effects literally puts the pilot in command of his own jet bomber.

The realism of actual flight.

A unique new engineering concept presents the player with a bird's-eye view of *continuously* moving video terrain passing below. The simulation of flight is realistic, and irresistible!

The "mission" is to destroy strategic targets that appear at random in the terrain as it passes under the aircraft.

Targets include patrolling enemy Airplanes, scoring 800 points; Oil Tanks, worth 450 points; Bridges, worth 450; and Electric Power Towers, scoring 350 points.

Built-in Incentive.

Pilot control Sky Raider's speed, zero in the bombsight and release missiles to destroy as many targets as possible within pre-set game limits.

To add even more incentive, the previously gained highest score is displayed on the monitor.

More Options for extra profit...
extra player challenge.

Game Time. Sky Raider can be set for 60, 80, 100, or 120 seconds per game.

Extended Play. Bonus play can be awarded for achieving pre-set point levels corresponding to each game-time increment.

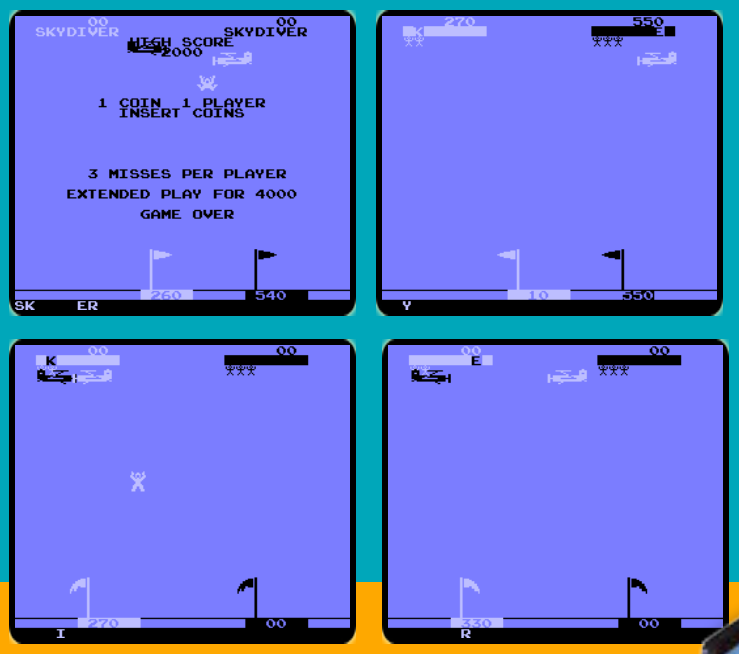
Four Languages. Operator may select English, French, German or Spanish video message presentation.

Coinage. 16 optional coin modes including 1 or 2 plays per coin, or 2 coins per play.

SKY RAIDER™
· Realistic 1 player combat bombing action
· Continuously moving "terrain," and random targets
· Built-in self-test system
· Optional bonus play
· Optional English, French, German or Spanish video messages.

Skydiver

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Skill*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rip Cord Parachute Handles
Buttons: *1 [Jump]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
with a blue Color plexiglass Overlay
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



The object of Skydiver is to guide a skydiver from a travelling plane to a like-colored ground target. The player must watch the wind speed and direction and judge the target position, plane speed, and duration of freefall before pulling the rip cord. After that, the player must guide the skydiver onto the target by moving the rip cord control either left or right.

The skydiver jumps from the plane whenever the player pushed the Jump button. The skydiver's parachute is opened when the rip cord is pulled. The rip cord control can be moved either left or right to help guide the diver on to the correct landing pad.

Points are scored for successfully landing on the target. The target point score is determined by the lenghth of freefall -- the longer the fall, the larger the point score. A double bonus score is awarded for spelling "SKYDIVER".

Owen Rubin, the designer and programmer of this game, hid his initials in the object graphics ROM.

The game was ported to Atari 2600 in 1979 by Jim Huether. Sky Diver has been re-released in recent years, such as Atari Anthology and Microsoft's Game Room.

"arcade-museum.com"

excerpt from the flyer:

Atari Does it Again!

Skydiver is a totally new concept in video skill games. The *first* of its kind! *Anywhere!*

Authentic ripcord controls, realistic video animation, new Spellout bonus incentive, new sound effects, including *musical tunes*, are standout attraction and replay feature.

The Realism of Actual Skydiving

Split-second timing and skill is the key to high scoring.

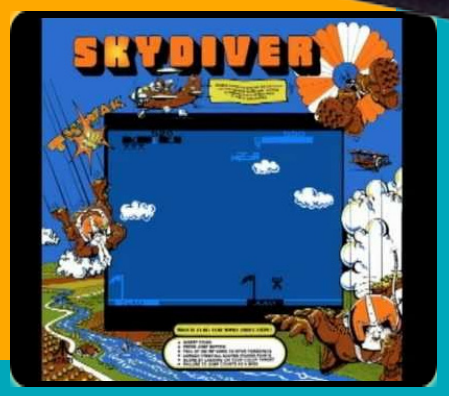
1 or 2 players can try their skill. (Single players compete with the computer.)

Each player skydives untill 3, 4, 5, or 6, "missed jumps" are used up.

The ground target appears in a different position after each successful jump.

"Wind direction," indicated by video windsocks, is random and variable.

Watching *airplane speed*, *wind direction* and *position of target*, the player decides when to jump, how long to hold freefall (to increase target score), pull ripcord and "guide" jumper to target.



High Risk Scoring Challenge

As long as the jumper is in freefall, the target gets smaller in size and *increases* in point value - the longer the fall, the higher the score for hitting the target.

Watch out! If the chute is *not* pulled in *time*, the jumper crashes and a video ambulance carries off the unlucky jumper.

Built-In Incentive

The new S-K-Y-D-I-V-E-R Spellout double score bonus is an exciting incentive feature.

If the "Jump" button is pressed when an individual letter in the name is flashing in the attract panel, the same letter appears on the monitor and flashes...

If jump is successful, the letter stays lit. When *all* letters are lit, players receives *double score*. And a musical fanfare that lets *everybody* know!

More Options for Extra Profits

Extended Play. An additional game can be awarded for achieving pre-set "hard" or "easy" score levels.

Game Time. 3, 4, 5, or 6 "missed jumps."

Coinage. 1 coin for 1 player, 1 coin for 2 players, 2 coins for 1 player, free play.

Four Languages. Operators may select English, French, German or Spanish video message presentation.

Built-In Reliability

Skydiver's unique self-test program displays all micro-processor and memory functions.

Durastress™ tested all solid state electronics, durable construction and Insta-part™ turnaround mean longer maximum earnings and location life.

Dimensions.

Height: 66", 192 cm;
Width: 25.5", 62 cm;
Depth: 27", 69 cm;
Monitor: 23" B/W

Cash in on High Flying Profits.

Get all the details from your Atari distributors *now*.

excerpt from the Manual:

Skydiver™ is a one- or two-player action game developed by Atari, Inc. The game is contained in an upright cabinet illustrated with brightly colored graphics to further enhance player appeal. A 23-inch TV monitor is mounted in the top front of the cabinet. The TV monitor viewing screen is shielded by a Plexiglas® panel that also displays graphics.

Player-operated controls are mounted directly below the TV monitor viewing screen on the front of the game cabinet. The controls consist of a rip cord control, a jump button and two LED switches labeled *Black Player Start* and *Blue Player Start*. A speaker mounted below the control panel provides the game sound.

The coin mechanism mounted on the front part of the cabinet below the control panel initiates the play. The cash box is located behind a locked access door to the coin mechanism.

The object of the Skydiver game is to successfully skydive from a traveling plane to a ground target that appears in a different position after each successful jump.

The player watches wind speed and direction using the blue or black wind socks. He or she must also judge target position, plane speed, duration of freefall before pulling the rip cord (to increase target score). Finally, the player must guide the man into the target using the rip cord control (left or right).

One or two players can simulate the action of skydiving using the authentic rip cord control.

The Skydiver game has three different modes of operation:

ATTRACT - Power accepted or as a result of the end of a game
READY-TO-PLAY - Coin accepted
PLAY - 4 to 5 seconds after start button is pressed

Your new Skydiver game is manufactured by Atari, Inc. and is ready to play immediately on removal from the shipping carton. Your cooperation is desired to supply the final touch of quality control to your game.

Be sure all major assemblies are checked.

Space Invaders

Manufacturer *Taito/Midway*
Release *1978*
Class *Wide Release*
Genre *Space*
Board pin *Space Invaders Pinout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail
Mini

Space Invaders is an arcade video game created by Tomohiro Nishikado and released in 1978. It was originally manufactured and sold by Taito in Japan, and was later licensed for production in the United States by the Midway division of Bally. Space Invaders is one of the earliest shooting games and the aim is to defeat waves of aliens with a laser cannon to earn as many points as possible.

Space Invaders was created by Tomohiro Nishikado, who spent a year designing the game and developing the necessary hardware to produce it. The game's inspiration is reported to have come from varying sources, including an adaptation of the mechanical game Space Monsters released by Taito in 1972, and a dream about Japanese school children who are waiting for Santa Claus and are attacked by invading aliens. However, Nishikado has cited Atari's arcade game Breakout as his inspiration. He aimed to create a shooting game that featured the same sense of achievement from completing stages and destroying targets, but with more complex graphics. Nishikado used a similar layout to that of Breakout but altered the game mechanics. Rather than bounce a ball to attack static objects, players are given the ability to fire projectiles at their own discretion to attack moving enemies.

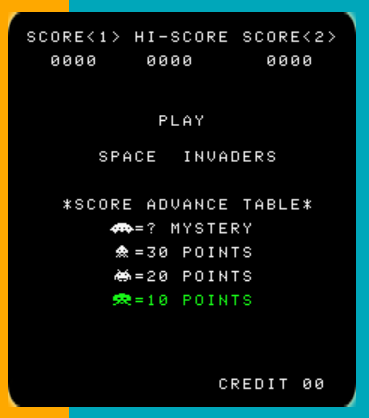
Early enemy designs included tanks, combat planes, and battleships. Nishikado, however, was not satisfied with the enemy movements; technical limitations made it difficult to simulate flying. Humans would have been easier to simulate, but Nishikado considered shooting them immoral. After the release of the anime Space Battleship Yamato in Japan, and after seeing a magazine feature about Star Wars, he thought of using a space theme. Nishikado drew inspiration for the aliens from H. G. Wells' The War of the Worlds and created initial bitmap images after the octopus-like aliens. Other alien designs were modeled after squids and crabs. The game was originally titled Space Monsters, inspired by a popular song in Japan at the time ("Monster"), but was changed to Space Invaders by Nishikado's superiors.

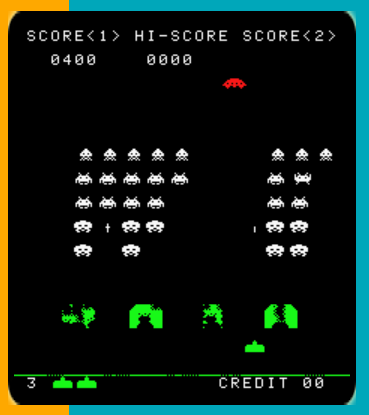
Space Invaders is a two-dimensional shooter game in which the player controls a laser cannon by moving it horizontally across the bottom of the screen and firing at descending aliens. The aim is to defeat five rows of eleven aliens—some versions feature different numbers—that move horizontally back and forth across the screen as they advance toward the bottom of the screen. The player defeats an alien,

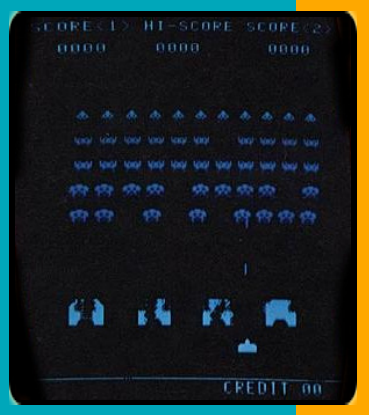
and earns points, by shooting it with the laser cannon. As more aliens are defeated, the aliens' movement and the game's music both speed up. Defeating the aliens brings another wave that is more difficult, a loop which can continue without end.

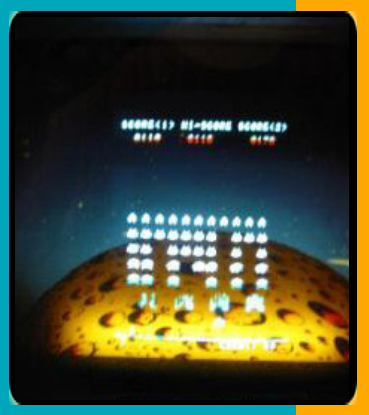
The aliens attempt to destroy the cannon by firing at it while they approach the bottom of the screen. If they reach the bottom, the alien invasion is successful and the game ends. A special "mystery ship" will occasionally move across the top of the screen and award bonus points if destroyed. The laser cannon is partially protected by several stationary defense bunkers that are gradually destroyed by numerous blasts from the aliens or player. A game will also end if the player's last laser base is destroyed.

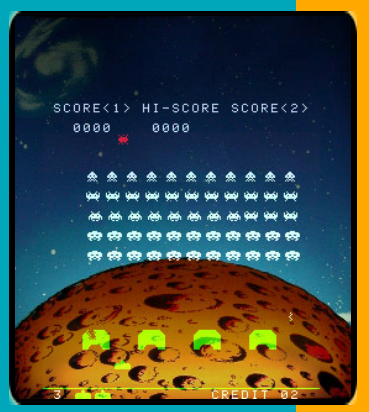
Because microcomputers in Japan were not powerful enough at the time to perform the complex tasks involved in designing and programming Space Invaders, Nishikado had to design his own custom hardware and development tools for the game. He created the arcade board using new microprocessors from the United States. The game uses an Intel 8080 central processing unit, features raster graphics on a CRT monitor and monaural sound hosted by a combination of analog circuitry and a Texas Instruments SN76477 sound chip. Despite the specially developed hardware, Nishikado was unable to program the game as he wanted—the Control Program board was not powerful enough to display the graphics in color or move the enemies faster—and he considered the development of the hardware the most difficult part of the whole process. While programming the game, Nishikado discovered that the processor was able to render the alien graphics faster the fewer were on screen.











Rather than design the game to compensate for the speed increase, he decided to keep it as a challenging gameplay mechanism.

Space Invaders was first released in a cocktail-table format with black and white graphics, while the Western release by Midway was in an upright cabinet format. The upright cabinet uses strips of orange and green cellophane over the screen to simulate color graphics. The graphics are reflected onto a painted backdrop of a moon against a starry background. Later Japanese releases used rainbow-colored cellophane, such as T.T. Space Invaders, followed by a version with a full-color display. The cabinet artwork features large humanoid monsters not present in the game. Nishikado attributes this to the artist basing the designs on the original title, Space Monsters, rather than referring to the in-game graphics.

Despite its simplicity, the music to Space Invaders was revolutionary in the gaming industry. Videogame scholar Andrew Schartmann identifies three aspects of the music that would have a significant impact on the development of game music:

• Whereas video game music prior to Space Invaders was restricted to the extremities (i.e., a short introductory theme with game-over counterpart), the alien-inspired hit featured continuous music—the well-known four-note loop—throughout, uninterrupted by sound effects. *"It was thus the first time that sound effects and music were superimposed to form a rich sonic landscape. Not only do players receive feedback related directly to their actions through sound effects; they also receive stimulus in a more subtle, non-interactive fashion through music."*

• The music interacts with on-screen animation to influence the emotions of the player. *"That seemingly pedestrian four-note loop might stir us in the most primitive of ways, but that it stirs us at all is worthy of note. By demonstrating that game sound could be more than a simple tune to fill the silence, Space Invaders moved video game music closer to the realm of art."*

• The music popularized the notion of variability—the idea that music can change in accordance with the ongoing narrative. The variable in Space Invaders (tempo) is admittedly simple, but its implications are not to be underestimated. *"Over the years, analogous strategies of variation would be applied to pitch, rhythm, dynamics, form, and a host of other parameters, all with the goal of accommodating the nonlinear aspect of video games."*

At the deepest of conceptual levels, one would be hard-pressed to find an arcade game as influential to the early history of video game music as Space Invaders. Its role as a harbinger of the fundamental techniques that would come to shape the industry remains more or less unchallenged. And its blockbuster success ensured the adoption of those innovations by the industry at large.

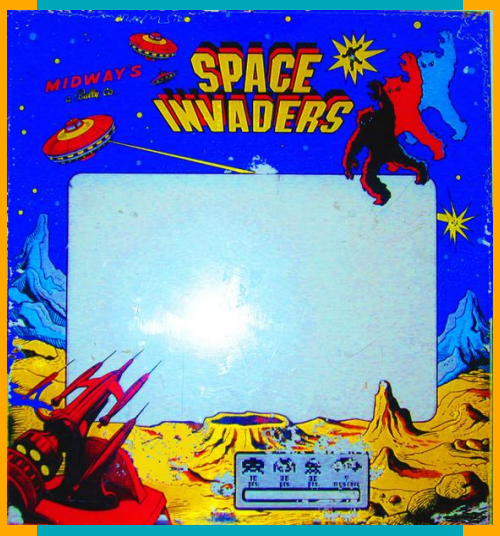
—Andrew Schartmann, Maestro Mario: How Nintendo Transformed Videogame Music into an Art, Thought Catalog (2013)

After the first few months following its release in Japan, the game became very popular. Specialty arcades opened with nothing but Space Invaders cabinets, and by the end of 1978, Taito had installed over 100,000 machines and grossed over $600 million in Japan alone. Within two years by 1980, Taito had sold over 300,000 Space Invaders arcade machines in Japan, in addition to 60,000 machines in the United States, where prices ranged from $2000 to $3000 for each machine, within one year. The arcade cabinets have since become collector's items with the cocktail and cabaret versions being the rarest. By mid-1981, more than four billion quarters, or $1 billion, had been grossed from Space Invaders machines, and it would continue to gross an average of $600 million a year through to 1982, by which

SPACE INVADERS
INSTRUCTIONS
● ONE OR TWO PLAYERS.
● INSERT COIN(S)
● SELECT ONE OR TWO PLAYER GAME
● TO MOVE 'LASER BASE' LEFT OR RIGHT, OPERATE THE CONTROL LEVER.
● TO FIRE LASER, PUSH 'FIRE' BUTTON
● UFO HIT GIVES PLAYER MYSTERY SCORE
● EXTENDED PLAY FOR 1500 POINTS
● GAME OVER WHEN PLAYER'S LASER BASE IS HIT 3 TIMES BY INVADER MISSILES OR WHEN INVADERS OVERRUN THE BASE
● IN TWO PLAYER MODE, PLAY ALTERNATES BETWEEN THE TWO
??? 10 PTS 20 PTS 30 PTS
TAITO CORPORATION

Instruction Card

Control Panel



Bezel Image

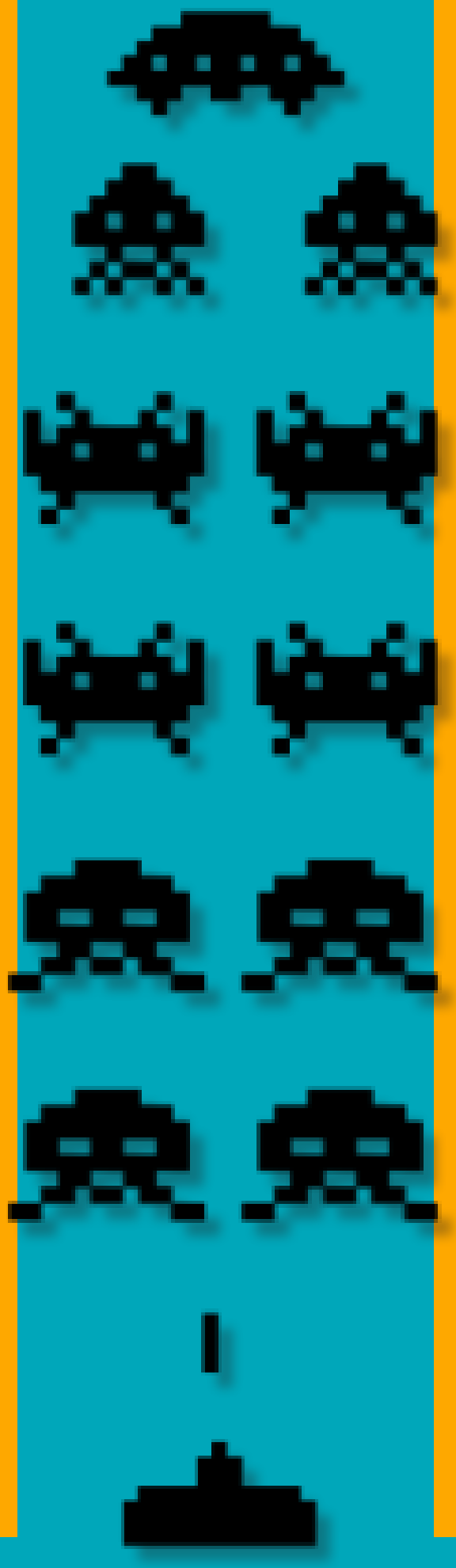
time it had grossed $2 billion in quarters (equivalent to $7.5 billion in 2018), with a net profit of $450 million (equivalent to $1.69 billion in 2018). This made it the best-selling video game and highest-grossing entertainment product of its time, with comparisons made to the then highest-grossing film Star Wars, which had grossed $486 million in movie tickets (costing $2.25 each on average) with a net profit of $175 million. Space Invaders had earned Taito profits of over $500 million. The 1980 Atari 2600 version was the first official licensing of an arcade game and became the first "killer app" for video game consoles by quadrupling the system's sales. It sold over two million units in its first year on sale as a home console game, making it the first title to sell a million cartridges. Other official ports of the game were made for the Atari 8-bit computer line and Atari 5200 console. Taito released it for the NES in 1985 (Japan only). Numerous unofficial clones were made as well, such as the popular computer games Super Invader (1979) and TI Invaders (1981), which was the top-selling computer game for the TI-99/4A through at least 1982.

An oft-quoted urban legend states that there was a shortage of 100-yen coins—and subsequent production increase—in Japan attributed to the game, although, in actuality, 100-yen coin production was lower in 1978 and 1979 than in previous or subsequent years. The claim also doesn't hold up to logical scrutiny; arcade operators would have emptied out their machines and taken the money to the bank, thus keeping the coins in circulation. Reports from those living in Japan at the time indicate *"nothing out of the ordinary ... during the height of the Space Invaders invasion."*

Game designer Shigeru Miyamoto considers Space Invaders to be the game that revolutionized the video game industry; he was never interested in video games before seeing it. Hideo Kojima also described it as the first video game that impressed him and got him interested in video games. John Romero and John Carmack cited Space Invaders as their introduction to video games. Several publications ascribed the expansion of the video game industry from a novelty

into a global industry to the success of the game. Edge magazine attributed the shift of video games from bars and arcades to more mainstream locations like restaurants and department stores to Space Invaders. Its popularity was such that it was the first game where an arcade machine's owner could make up for the cost of the machine in under one month, or in some places within one week.

Technology journalist Jason Whittaker credited the game's success to ending the video game crash of 1977, which had earlier been caused by Pong clones flooding the market, and beginning the golden age of video arcade games. According to The Observer, the home console versions were popular and encouraged users to learn to program; many who later became industry leaders. 1UP.com stated that Space Invaders showed that video games could compete against the major entertainment media at the time: movies, music, and television. IGN attributed the launch of the arcade phenomenon in North America in part to Space Invaders. Electronic Games credited the game's success as the impetus behind video gaming becoming a rapidly growing hobby and as *"the single most popular coin-operated attraction of all time."* Game Informer considered it, along with Pac-Man, one of the most popular arcade games that tapped into popular culture and generated excitement during the golden age of arcades. In 1996, Next Generation put it at number 97 in their "Top 100 Games of All Time", saying that it *"provides an elegance and simplicity not found in later games like Phoenix."* IGN listed it as one of the "Top 10 Most Influential Games" in 2007, citing the source of inspiration to video game designers and the impact it had on the shooting genre. The Times ranked it No. 1 on its list of "The ten most influential video games ever" in 2007. 1UP ranked it at No. 3 on its list of "The 60 Most Influential Games of All Time," stating that, in contrast to earlier arcade games which *"were attempts to simulate already-existing things,"* Space Invaders was *"the first video game as a video game, instead of merely a playable electronic representation of something else."* In 2008, Guinness World Records listed it as the top-rated arcade game in technical, creative, and cultural impact.



As one of the earliest shooting games, it set precedents and helped pave the way for future titles and for the shooting genre. Space Invaders popularized a more interactive style of gameplay with the enemies responding to the player controlled cannon's movement, and was the first video game to popularize the concept of achieving a high score, being the first to save the player's score. While earlier shooting games allowed the player to shoot at targets, Space Invaders was the first in which targets could fire back at the player. It was also the first game where players were given multiple lives, had to repel hordes of enemies, could take cover from enemy fire, and use destructible barriers, in addition to being the first game to use a continuous background soundtrack, with four simple diatonic descending bass notes repeating in a loop, which was dynamic and changed pace during stages, like a heartbeat sound that increases pace as enemies approached.

It also moved the gaming industry away from Pong-inspired sports games grounded in real-world situations towards action games involving fantastical situations. Whittaker commented that Space Invaders helped action games become the most dominant genre on both arcades and consoles, through to contemporary times. Space Invaders set the template for the shoot 'em up genre. Its worldwide success created a demand for a wide variety of science fiction games, inspiring the development of arcade games, such as Atari's Asteroids, Williams Electronics' Defender, and Namco's Galaxian and Galaga, which were modeled after Space Invaders's gameplay and design. This influence extends to most shooting games released to the present day, including first-person shooters such as Wolfenstein, Doom, Halo and Call of Duty. Space Invaders also had an influence on early computer dungeon crawl games such as Dungeons of Daggorath, which used similar heartbeat sounds to indicate player health.

Space Invaders, along with Pac-Man and Pong, shares the notorious distinction of being one of the most duplicated, bootleged and/or hacked arcade games.

excerpt from the Taito flyer:

Tatio America introduces
THE NEW SPACE INVADERS TRIMLINE

... the world's most popular game in the most compact cabinet!
'Reach new profit heights!
'Enter a galaxy of new locations!

It's maximum fun and profit per square foot! It's the go-anywhere, played-everywhere video from Tatio.

Height: 138c/m (54")
Width: 51 c/m (20")
Depth: 61 c/m (24")
Floor Space Required:
.31 sq.m (3.3 sq ft.)

excerpt from the UAI Cocktail flyer:

This is the original Invaders, one of the "hottest" games on the market today.

Available in a table top format with a 14" monitor and sound effects. Comes complete with decorative formica top, which eliminates the worry about glass tops, and a colored plastic overlay.

- One or two players
- U.S. quarter coin chute
- All instructions in English
- Adjustable leg height

excerpt from the Midway Cocktail flyer:

IN COCKTAIL TABLE MODEL

Now **you** can invade new markets and widen your horizons with this smartly styled, compact "sit-down" video game. A great 'door opener' that fits beautifully in lounges, clubs... anywhere - to give you more money-making locations. The game's the same... a proven winner with all the action and excitement of the original upright arcade model. For 1 or 2 players using a 19" monitor flip-flop screen. Take advantage of added profit opportunities with this high income producer and its expanded appeal.

DIMENSIONS:
Height: 29" (73.63 cm)
Depth: 32" (81.25 cn)
Width: 22" (55.86 cm)

excerpt from the Midway upright flyer:

The electrifying new one or two player game in which the player match their skill and wits in defense of the planet Earth, against waves of attacking invaders from outer space.

The player must strategically position, then fire this laser missile launcher attempting to knock out the ever-attacking invaders before they can drop missiles destroying the defender's productive bunkers and missile launcher.

Cabinet size:	Height 68”	(162.6 CM)
	Width 26 1/2”	(67.3 CM)
	Depth 32”	(86.4 CM)
Weight:	260 lbs.	(117 k)

1978
110

The Invaders

Manufacturer *Zaccaria*
Release *1978*
Class *Bootleg*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

The Invaders, released in 1978 by Zaccaria is a copy of Taitos very successful 'Space Invaders'.

The gameplay is very similiar in nature to the original. For a start, its a one play affair as is the original. Players have a little tank, and have to shoot up at rows and rows of descening invaders.

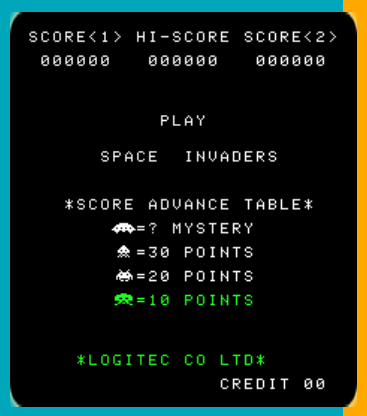
The extent of the copy isn't constrained to just the game. The cabinet itself, resplendent with marauding space monsters, is itself similar to the cabinet hosting the original.

One of the main differences between Zaccaria Invaders and Taito's Space Invaders is that there is a bit of colour added to the game. Whereas the original has just a black background, The Invaders has a backdrop consisting of a sky and a barren moon.

"retrogamesparty.co.uk"

Space Invaders

Manufacturer *Logitec*
Release *1978*
Class *Bootleg*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail



Logitec Co., ltd. was one of the sub-company of Taito. During the famous 'Invader Boom', Logitec made their own version. But Logitec doesn't have copyright. Then, Logitec and Taito relation was end. Logitec developed 'Pro-Golf', but this video game was a flop (mainly because Data East produced a game with the same name). So, Logitec became a Hard Disk manufacturer and Hard Disk recover Company.

This bootleg of "Space Invaders" has a color monitor. While most of the screen remains B&W, the green is actually generated by the PCB and although it looks very much like an overlay it's not. At the time, this pirated PCB, because of it's design and minimal memory room on the PCB, was very complex. It used an old 8080 processor which unlike the Z80 processor, it had its limitations. When this game was first designed it was originally going to be released as a B&W game and not color. The green is done by taking a segment out of the video processing area of the PCB and pulling it down with a bipolar prom to generate the affect. There are actually 2 video lines on this pcb - 1 for B&W and the other for sync and color.

This bootleg version is also available in a cocktail model, known by the same title as the original Taito Corp. Japan cocktail model (complete with "T.T" prefix).

"games-db.com"

Alien Invasion Part II

Manufacturer *(unknown)*
Release *1978*
Class *Bootleg*
Genre *Space*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

Alien Invasion Part II Description is a bootleg of Space Invaders. Not much is known about this version.

excerpt from the Instruction Card:

INVADER GAME

a real thriller to play - how high can you score?

HOW TO PLAY:

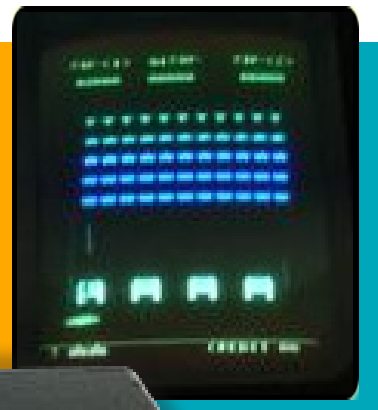
Either 1 or 2 people can play. For 2 players - sit on opposite sides.

25c - one player
50c - two players

1. Insert coin(s)
2. Select either 1 player or 2 player yellow button.
3. For 2 players, when one cannon is destroyed it becomes the other players turn.
4. Red button fires rocket from cannon.
5. Black handled lever moves cannon left and right for avoiding invaders fire and aiming the cannons rocket fire.
6. Hitting the UFO that appears across the top of screen from time to time scores a “Mystery” amount of points.
7. A score of more that points gives you one additional cannon.
8. Game ends when all of your cannons have been destroyed or the invaders have taken over your territory.

Space King

Manufacturer *Konami*
Release *1978*
Class *Wide Release*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*



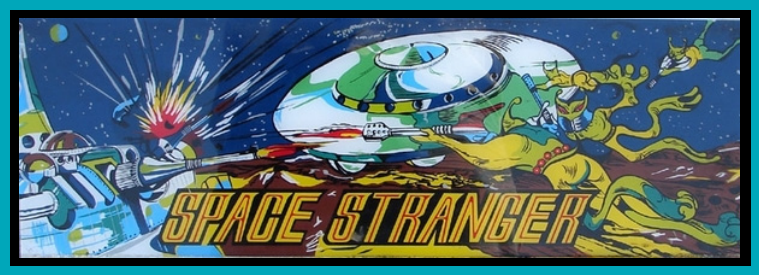
Konami’s first foray in the arcade gaming market consist of a Space Invaders clone, using identical graphics. This was published under the name Leijac.

Space King is the same as Space Invaders, only the graphics have more detail and the labels at the top of the screen for player one, player two and the high score are written using Japanese katakana.

1978
112

Space Stranger

Manufacturer *Yachiyo Electronics*
Release *1978-1979*
Class *Bootleg*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

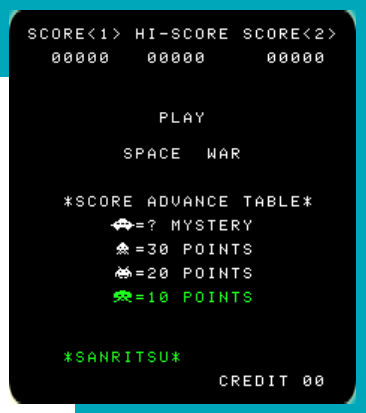


Super Space Stranger

Space Stranger is a rare Bootleg of Space Invaders.
note: I am not sure if there is a difference between Space Stranger and Super Space Stranger, or if it's just a name change.

Space War

Manufacturer *Sanritsu*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

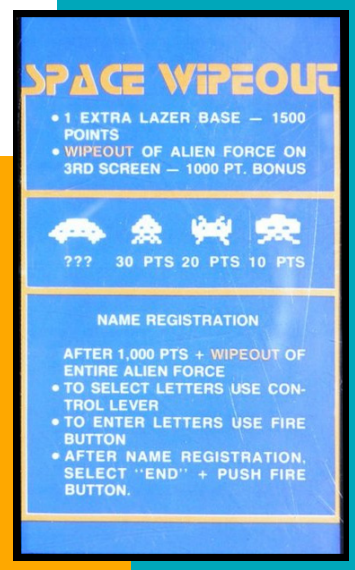


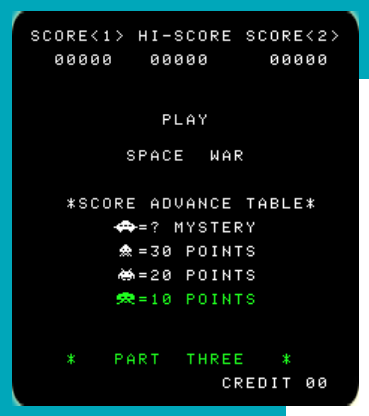
Space Wipeout

Manufacturer *Taito*
Release *1978*
Genre *Shooter*

Space Wipeout is a clone of Space Invaders. The game selfdescribes itself on the attract screen as the "Most Exciting Version". This text replaces Score Advance Table in the original. A credit line at the bottom of the screen states Beyer and Brown. Game play matches the original.

"arcade-museum.com"


SPACE WIPEOUT
• 1 EXTRA LAZER BASE — 1500 POINTS
• WIPEOUT OF ALIEN FORCE ON 3RD SCREEN — 1000 PT. BONUS
??? 30 PTS 20 PTS 10 PTS
NAME REGISTRATION
AFTER 1,000 PTS + WIPEOUT OF ENTIRE ALIEN FORCE
• TO SELECT LETTERS USE CONTROL LEVER
• TO ENTER LETTERS USE FIRE BUTTON
• AFTER NAME REGISTRATION, SELECT "END" + PUSH FIRE BUTTON.



Space War Part Three

Manufacturer *"Unknown"*
Release *1978*
Class *Bootleg*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

This game is a Space Invaders copy, except it is much faster. The tank's movements are rough and a precise-positioning may be hard to achieve.

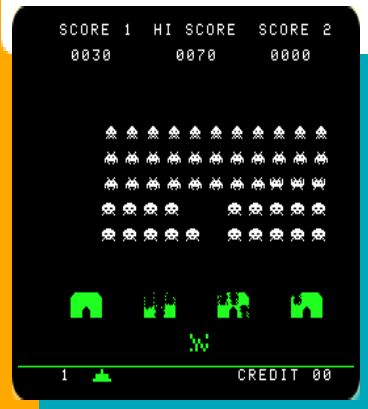
The aliens' shots travel faster and running from them may be very difficult. In many cases, a good technique is to stand still, letting the shot reach the vertical position, and then shoot at it. By running away, the shot may destroy the tank with a lateral hit, even if players are hiding behind a block.

Apparently, bonus-ships always move from the left to the right side of the screen and are worth 50-150 points. Completing the first wave may be a challenge even for skilled Space Invaders players. The second wave has no substancial differences; the aliens begin moving from a lower rank and at a faster pace.

"arcade-museum.com"

Super Invader Attack

Manufacturer *Zaccaria/Zelco*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*



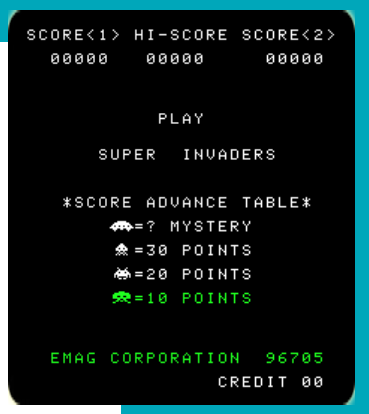
Super Invaders

Manufacturer *"Unknown"*
Release *1978*
Class *Bootleg*
Genre *Shooter*
Hardware *Midway 8080*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

This unknown 1 player version of Super Invaders is a bootleg of Space Invaders.

Super Invaders

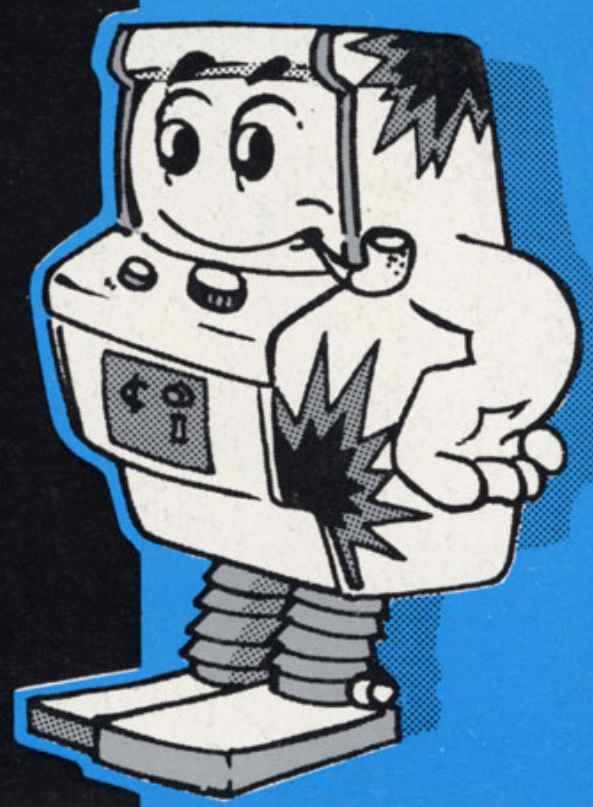
Manufacturer *EMAG Corporation*
Release *1978*
Class *Bootleg*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Super Invaders

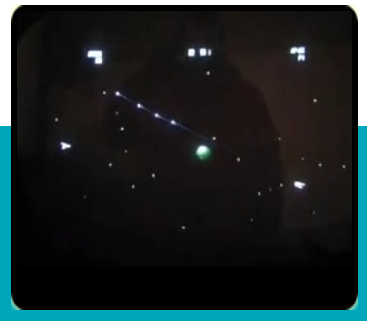
Manufacturer *Zenitone-Microsec Ltd.*
Release *1978*
Class *Bootleg*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright (?) Cocktail*

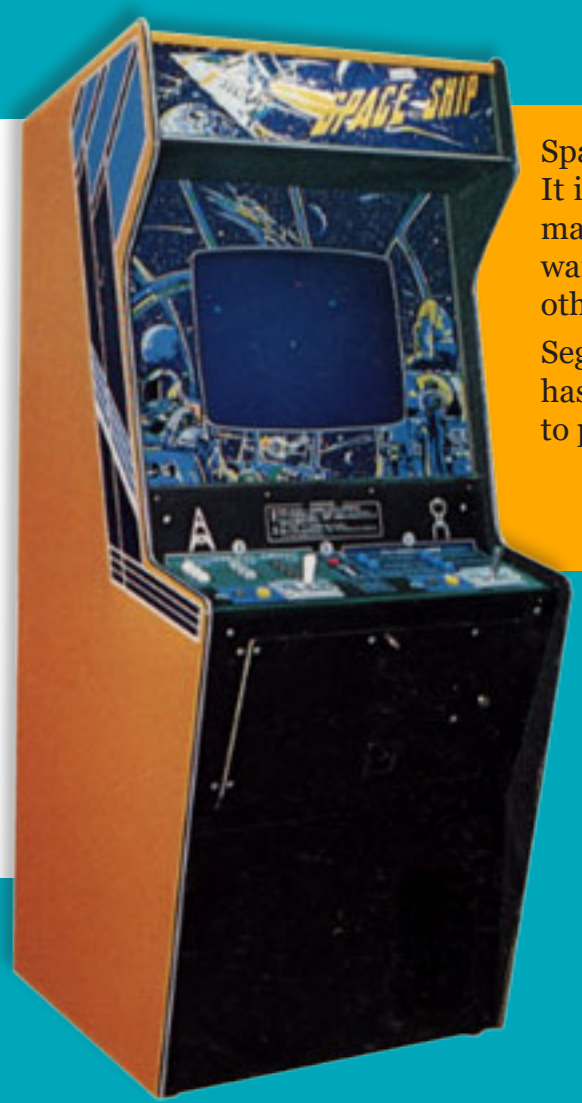
HYPERSPORTS
HYPERSPORTS



Space Ship

Manufacturer *Sega*
Release *1978*
Genre *Space*
Hardware *Discrete logic*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Either*
Type: *Vector*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*





Space Ship is a vector-based arcade game released by Sega in 1978. It is a reworked version of Space Wars, a 1977 arcade game by Cinematronics, which is in turn based on the iconic computer game Spacewar!. Space Ship was released exclusively to a Japanese audience - other markets saw Cinematronic's original game.

Sega's version of the game is almost identical to Space Wars, however has slightly different dipswitch settings, giving the player more time to play the game.

"segaretro.org"

Star Rub is a ball and paddle game where points are scored for erasing stars on the screen.

excerpt from the flyer:

Vanishing Stars Lure You To A Space Adventure

"Star-Rub" is a new, competitive game in which points are scored by erasing the 196 stars on the screen

- Select one- or two- player action.
- Push the start button, and the balls will be put in play.
- Receive the balls with the paddle.
- Wipe out as many stars as you can.

Star Rub

Manufacturer *Universal*
Release *1978*
Genre *Ball and paddle*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

SPACE WALK

Space Walk

Manufacturer *Midway*
Release *1978*
Class *Wide Release*
Genre *Space*
Hardware *Midway 8080*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Rotary: *Analog*
Buttons: *1 [Thrust]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Space Walk is an arcade game that was released by Midway Games in 1978; it utilizes an Intel 8080 microprocessor (running at: 1.9968 MHz), and both players must use two rotary controllers to direct a hovering platforms across the screen (on the left side of the screen, 1P's is higher than 2P's, and vice versa on that right side). At the start of the game a spaceman will walk into view from the side of the screen, and then jump down onto a platform - and, if there are not any other spacemen upon the platform when he lands, he will get into a rocket, then fly up to the top of the screen, but players will have three seconds to position it, before it launches (and they can use this to hit the topmost targets). Once he reaches the top of the screen, the spaceman will get back out of the rocket; if there is a spaceman on one side of the platform, the game will continue (in a manner like that of Midway's own Clowns), until the other player (or the CPU if only one person is playing) catches the jumping spaceman, which will trigger another rocket launch), or both players miss him (and he falls off the bottom of the screen).

"strategywiki.org"

excerpt from the flyer:

a challenging one or two player game in which one player plays against the computer, while two players can compete to gain control of the game, for the highest score.

Size:

Height	74 in. (188 cm)
Width	32 in. (81 cm)
Depth	33 1/2 in. (86 cm)

Speed Freak

Manufacturer *Vectorbeam*
Release *1978*
Class *Wide Release*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
- **Steering:** *Wheel*
- **Shifter:** *4-position (1/2/3/4)*
- **Pedals:** *1*

Monitor
- **Orientation:** *Horizontal*
- **Type:** *Vector*
- **CRT:** *Black and White*

Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Speed Freak is a monochrome vector arcade game created by Vectorbeam in 1979. Along with Atari's Night Driver, it is one of the earliest first-person driving games and the first such game known to use vector graphics.

The game is a behind-the-wheel driving simulation where the driver speeds down a winding computer generated road past other cars, hitchikers, trees, cows and cacti. Occasionally a plane will fly overhead towards the screen. One must avoid crashing into these objects and complete the race in the allotted time. The player can crash as many times as he wants before the time runs out and players were treated to two different crash animations. The first was a simple cracked windshield effect, the second was a crash where the car explodes into car parts that fly through the air.

This driving game is very intense. The perspective is somewhat overhead and behind the hood of the car. In fourth gear players are moving extremely fast and control is difficult, making for exciting and hectic manuevers. The oncoming traffic is always the same car composed of 3-dimensional "wireframe" vector graphics.

Speed Freak was done by Larry Rosenthal, (who had designed the original board and Space Wars). Speed Freak was Larry's first game for Vectorbeam, which he later sold to Cinematronics.

The sideart consists of one sticker on each side, displaying the name of the game on one side of a road and a speeding red car, from a topdown perspective, on the other side. The marquee is metal and opaque, displaying the name in the same lettering as the side with no bulb fixture or lighting of any kind behind it. The monitor bezel does not contain any artwork. The control panel is black except for a yellow and red stripe curving around the wheel and shifter.

"arcade-museum.com"

excerpt from the flyer:

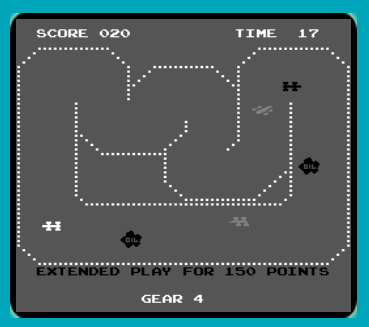
Challenge the ever turning road with your greatest speed. But be careful, you're not alone on the road. A true three-dimensional car is constantly coming at you. Crashing into this car causes a spectacular three-dimensional crash in which you see true actual parts of the car exploding and spinning off into the distance. Stay on the road or you can also crash, which brings up a cracked windshield. All crashes stop game play with no loss of time, although the driver must get back up to speed by shifting through the four gears.

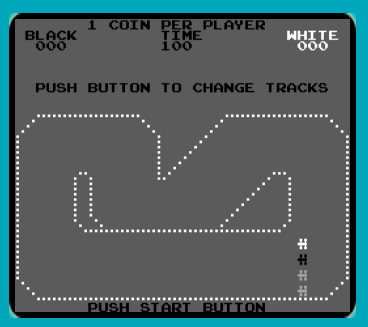
All this plus a four-speed gear shift, realistic scenery, hitchhikers and various other objects enhance the game. Add to that, extended play feature, selectable coinage and the ever popular Vector Monitor you have the greatest single player upright driving game ever built.

Available now through your nearest Vector Beam distributor.

Sprint One

Manufacturer *Kee Games*
Release *1978*
Class *Wide Release*
Genre *Racing*
Board pin *Sprint One Pinout*
Mode *1 Players*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Shifter: *4-position (1/2/3/4)*
Pedals: *1 [Accelerate]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Sprint 1 is a racing arcade game, developed by Kee Games for Atari in 1978; it utilizes a Motorola M6502 (running at 756 KHz), and, as the name suggests, it is the fourth title in their Sprint series. The gameplay is identical to that of the first title in the series, Sprint 2, which was released two years earlier, only with the removal of the second-player capability - and the tracks shall also advance automatically once the player has completed a full lap of the current one. Everything else is the same.

The game is housed in a black cabinet with no art on the sides or front. Minimal artwork surrounds the steering wheel and shifter.

"strategywiki.org"

excerpt from the flyer:

Sprint 1™ is the exciting new 1 player version of the top earning Sprint 2™ with new features and options added for extra challenge, and extra replay.

A new compact design along with the same spectacular action play features means Sprint 1 can now generate the same high collections as Sprint 2 in locations with less available floor space.

The sleek wood grain adds even more to the location versatility of this popular attraction.

12 games in one.
The player sprints the clock around as many tracks as possible with 2 computer "drone" cars as constant traffic companions adding to the skill required. Hitting "drone" cars causes temporary loss of control and game time.

There are 12 different tracks that change automatically. Operators can program the game to change tracks after one lap or after every 2 laps.

Realistic acceleration, quick response steering, 4 speed shifting, "drifting" on corners and optional oil slicks add to the fast-paced driving action.

More realistic sound - the roar of engines, the screeching of tires around turns and over oil slicks put the player *in* the action,

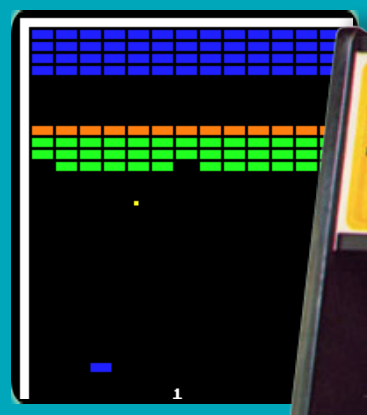
Exclusive operator options.
Extended play. An extra ride can be awarded after a pre-selected score is reached by the driver. "Extended Play" also flashes on the screen with a numeric count-down in seconds.

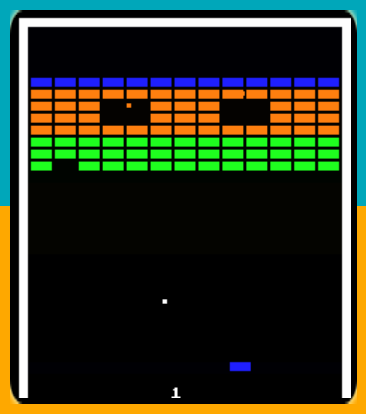
Oil slicks. You can have Sprint 1 with or without oil slicks to add more challenge.

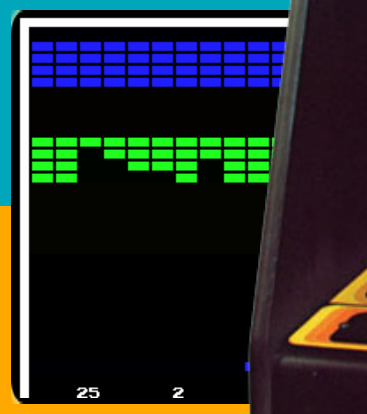
1978
120

Super Breakout

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Buttons: *1 [Launch Ball]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*







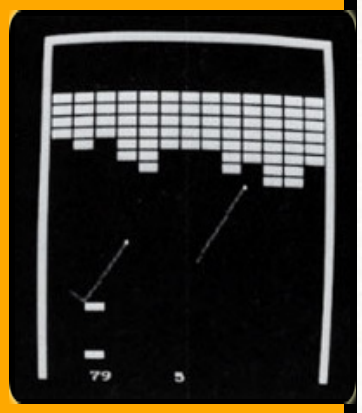
Super Breakout utilizes a Motorola M6502 (running up at 375 KHz), and, as the name suggests, it is the sequel to Breakout, which was released two years earlier. There are three different modes to choose from: Double Breakout, the playfield for which contains in fifty-two orange blocks (5-14 points), fifty-two green blocks (1-6 points), two paddles and two balls, Cavity Breakout, which contains in forty-four orange blocks (7-21 points), and fifty-two green blocks (1-9 points), one paddle, and three balls (the second and third of which have to be freed before they come into play) and Progressive Breakout which contains fifty-two blue blocks (7 points) and fifty-two green blocks (5 points), one paddle, and one ball - and the blocks shall be lowered down towards the paddle, at a rate determined by the number of times the ball lands on the paddle, but as the ball destroys them, additional rows of blocks shall appear at the top of the screen and be lowered down towards the paddle at an increasing rate. This is also the only mode for which it's possible for a player to receive an infinite amount of points by playing, but the score display shall roll over at 10000.

"strategywiki.org"

The cabinet artwork has an artist's rendering of bricks with an electrical bolt and explosion hitting an area. The same artwork appears on the marquee.

Super Breakout is featured in a number of different Atari compilation packs due to the relative ease of emulating its CPU-based hardware compared to the original game's design.

excerpt from the flyer:

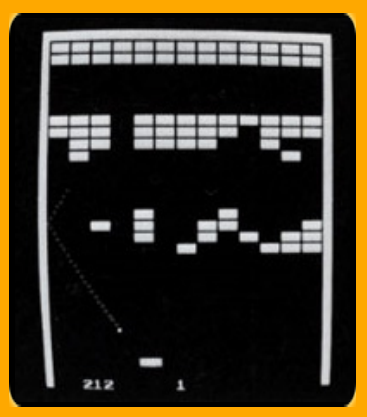


Super Breakout is three games in one.

Super Breakout features **three new "breakout" games.** Each is **player-selectable** and each requires even more skill. New variety and skill challenges represent unlimited replay attraction.

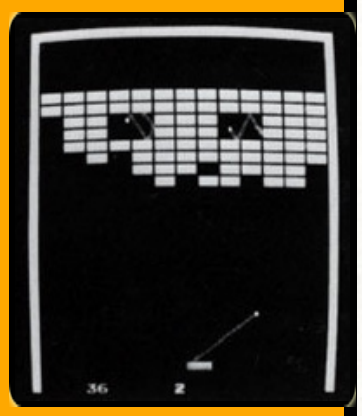
Double Breakout™

Play: Two balls are served to 2 paddles. Each bricks knocked out counts double as long as 2 balls are in play.



Progressive Breakout™

Play: Progressive Breakout starts with 2 "walls" of 4 rows of bricks that "fall" or scroll continuously from the top of the monitor. New rows of bricks will be entered from the top to form a pattern of 4 rows of blanks. This permits players to break through may times during play. As game progresses, the bricks "fall" faster and faster.



Cavity Breakout™

Play: Two extra balls are "captured" in a cavity within the wall of bricks. These captured balls do not knock out bricks untill they are freed from their cavities. This allows up to 3 balls at once. Each bricks will count double when 2 balls are in play and triple when 3 balls are in play.

SUPER
BREAKOUT
TM
Three new player-selectable "breakout" games in one for 1 or 2 players.
"Double Breakout" has two balls, two paddles for double the action.
"Cavity Breakout" has two extra captured balls which can be released allowing up to three balls to be going at once.
"Progressive Breakout" has multiple walls of bricks that "fall" continuously, challenging players to "break out" many times.
3 or 5 balls.
Colored monitor overlay.
Optional extended play.
Built-in self-test system.
ATARI
A Warner Communications Company
© Atari Inc. 1978

1978
122

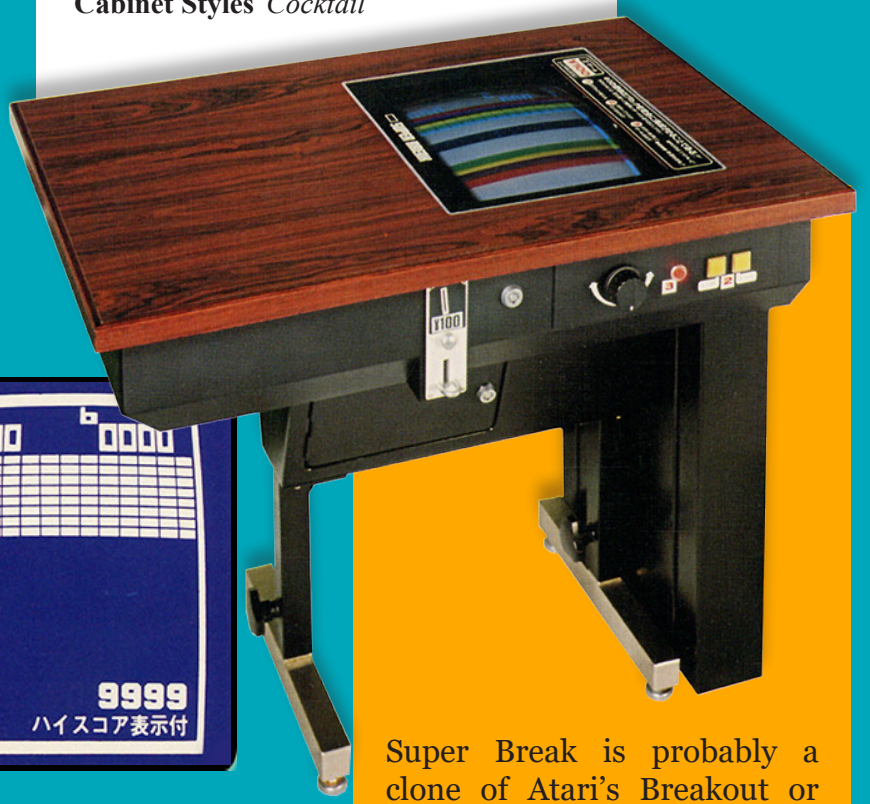
Super Block

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *xxx*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Super Block is a ball and paddle game from Taito. The game is a version of Super Breakout.

Super Break

Manufacturer *Nihon Bussan/AV Japan*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*



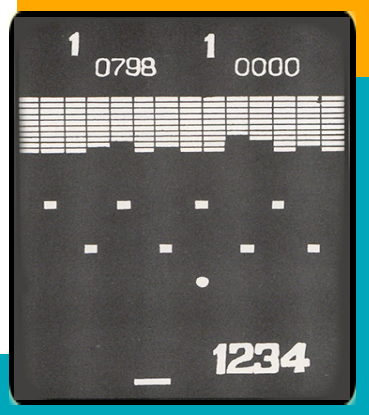
Super Break is probably a clone of Atari's Breakout or Super Breakout.

Super Break 2

Manufacturer *Nihon Bussan/AV Japan*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

It's possible this may not actually be a clone of Breakout but a CPU-based Breakout sequel such as Super Breakout due to its age and inclusion in the Table 2 in 1 games.

"mamedev.emulab.it"



Top Runner

Manufacturer *Sega*
Release *1978*
Genre *Racing*
Hardware *Discrete logic*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Super Speed Race V

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Deluxe*

Super Speed Race V is a racing game developed by Taito for the arcade platform, and distributed by Midway in North America. It is a sequel to the arcade games Speed Race (1974) and Speed Race Twin (1976). Super Speed Race is one of the first video games to feature RGB colour graphics.

Players use the cabinet's steering wheel to navigate the car around the track. The game utilizes a single gas pedal to make the car accelerate.

"giantbomb.com"

Super Road Champions

Manufacturer *Model Racing*
Release *1978*
Genre *Racing*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Derived from Road Champions. There are no known versions of Super Road Champions manufactured by Taito or any other company, then could be an ehnancement designed directly by Model Racing.

It seems to have a color monitor (while Road Champions's one was monochromatic).

The normal version allowing up to two players, but there was also a compact version for one player (Super Champions Road 1). No CPU, 2 ROMs (yet dumped).

"tilt.it"

excerpt from the flyer:

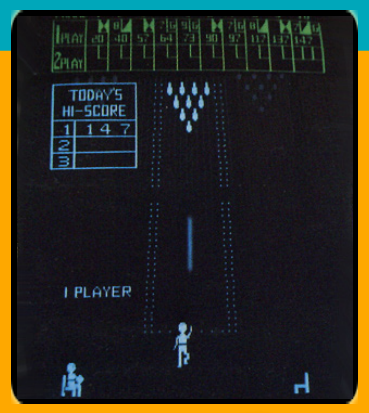
- An exhilarating speed race for 1 or 2 players.
- A real Formula 1 race start-off.
- Skidding on the bends and on wet roads.
- The correct use of gears increases the speed.
- 400 KM 1st. ext. play. - 800 KM 2nd. ext. play.
- Realistic sound effects:
  2 different motor sounds.
  Skidding tyres on bends and wet tarmac.
  Fanfare at 1st and 2nd ext. play.

OPTIONAL
Variations on Standard Tracks:
- more or fewer bends.
- narrow or wide roads.
- more or fewer overtaking cars.
- adjustable time.

Top Bowler

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Sports*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

Top Bowler is a bowling game from Taito.



T.T Top Bowler

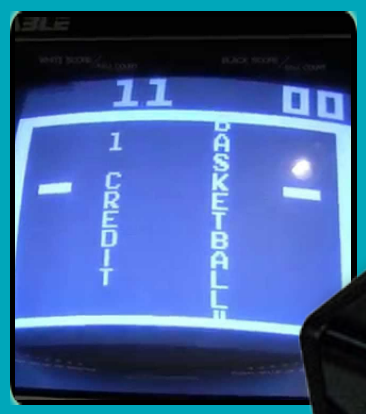
Players use a rotary control and move a trampoline along the bottom of the screen, bouncing the game's character up and down to collect stars and reach the trapezes to score points.

Trampoline

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Buttons: *1 [Jump]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

Tournament Table

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Sports*
Mode *4 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Rotary: *Analog with push-down button*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*



Tournament Table is a compilation arcade game; it runs upon its own dedicated hardware (a Motorola M6502 running up at 1.193191 MHz, with a TIA for sound). The players use a rotary controller with a push-down button to play one of twelve games: Breakout, Soccer I/II, Foozpong, Hockey I/II/III, Quadrapong, Handball, Volleyball, and Basketball I/II - and Breakout is the same as the original but Soccer I and II have their players controlling either a pair of paddles or a single one, white for 1P, black for 2P, white-and-gray-striped for 3P and black-and-gray-striped for 4P, to try and bounce a ball into the two holes on either side of the screen. Foozpong is a cross between foosball and Pong, and has the players controlling a trio of paddles, to try and bounce the ball into the holes while Hockey I, II and III also have them controlling a trio of paddles (but to try and bounce the ball into the square brackets on the left and right sides of the screen, and III is for up to two players only); Quadrapong is just like Soccer II but with a hole on all four sides of the screen, Handball has the players trying to intercept the ball when it is their turn and having to stay out of the way when they are not “up” to return it, Volleyball has them trying to bounce the ball over four white blocks and back again without letting it land, and Basketball I and II have them trying to bounce the ball into the two blocks at the top of the screen. The game was later converted to the then-new Atari 2600 under the name of Video Olympics - and it was one of the nine titles launched with the system.

“strategywiki.org”

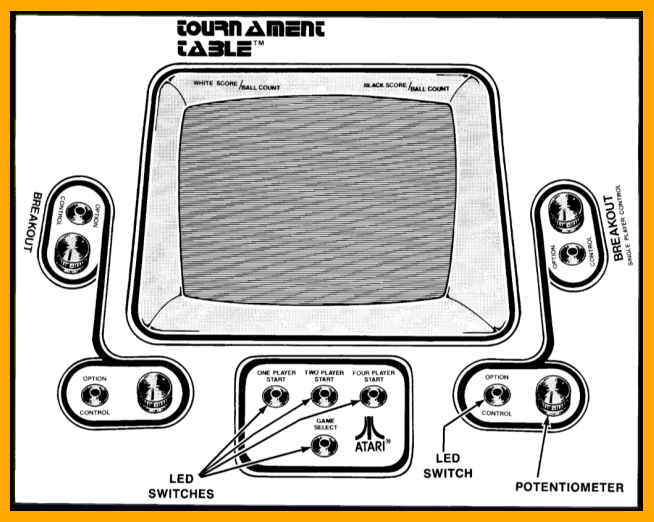
excerpt from the manual:

Tournament Table™ is a collection of 12 paddle games contained in Atari's cocktail table cabinet. A 19-inch black-and-white TV monitor is mounted in the center of the cabinet and is tilted slightly forward from a horizontal position. The TV monitor is surrounded by a Plexiglas® control panel on top of the game cabinet. The control panel includes:

- Four sets of player controls
- ONE-PLAYER START button (LED switch)
- TWO-PLAYER START button (LED switch)
- FOUR-PLAYER START button (LED switch)
- GAME SELECT button (LED switch)

The GAME SELECT button is functional at all times except during game play. The start buttons can be activated after the proper amount of coins have cleared the coin acceptor. Each set of player controls consist of an OPTION CONTROL button LED switch), and a potentiometer. The potentiometer controls the vertical or horizontal movement paddle. The OPTION CONTROL button is used to control one of the three ball/paddle features (except in Breakout where it function as a ball serve control).

Tournament Table offers three options/features, each one designated for a specific games. The three option/features are:



- WHAMMY: Puts sharp angles on the ball when the OPTION CONTROL button is pressed and held down. If the button is released immediately it appears to distort the direction and speed in which the ball is traveling. Has no effect when the ball is traveling in a direct horizontal line across the screen.
- CATCH: Causes the ball to stick to the paddle when the OPTION CONTROL is pressed and held down. Players can use this feature to aim a hit, pass to a team paddle, or plan strategy. When the button is released the ball will release. The angle at which the ball leaves the paddle depends on which section of the paddle the ball is caught. It is possible to "scrape" the ball off the paddle by moving the paddle through the edge of the playfield and back.
- JUMP: This feature causes the paddle to jump vertically from the bottom of the playfield to the playfield center when the OPTION CONTROL button is pressed and held down. The paddle will return to its home position when the button is released. The paddle must be jumped before the ball passes through the playfield center or the ball will travel through the paddle instead of bouncing off the paddle.

All of the games (except Breakout, Soccer II and Hockey III) have a two- or four-player version. The object in all games is to obtain the highest score when the game ends.

excerpt from the flyer:

12 Games in 1

Tournament Table is a 12 game sports extravaganza that will keep patrons entertained for hours - and coming back for more!

Players can "program" any of the 12 games they want to play. Every time the "Game Select" button is pressed, each of the 12 games appears sequentially on the monitor along with the name of the game for easy identification and selection. Games names are also printed on the bezel around the monitor so players can find the desired game quickly. Pressing one of the "Start" buttons begins the action.

More Games. More Fun.
More Profits!

The action is challenging and competitive. Three different play options on specific games add to the variety. There is the "catch" option which holds the ball on the paddle, the "whammy" option which makes the ball go faster, and the "jump" option which makes the paddles jump. Games include:

Breakout™: 1 or 2 players on the popular, profitable Breakout game with a new black and white checkerboard brick design.

Soccer I: 2 or 4 players compete to hit the goal whit the "whammy" feature included. Each player has 2 paddles.

Soccer II: 4 player soccer game with "catch" feature. Each player controls 1 paddle.

Foozpong™: A video version of foosball for 2 or 4 players with the "catch" feature to add to the realism.

Hockey I: 2 or 4 player hockey-type game with a "whammy" feature and 1 paddle per player.

Hockey II: The hockey game with a "catch" feature built-in for 2 or 4 players. Each player has a column of paddles.

Hockey III: A 2 player version of hockey with "catch" option and 3 paddles per player.

Quadrapong™: A new 2 or 4 player version of the exciting four-sided Pong game with two goals per player.

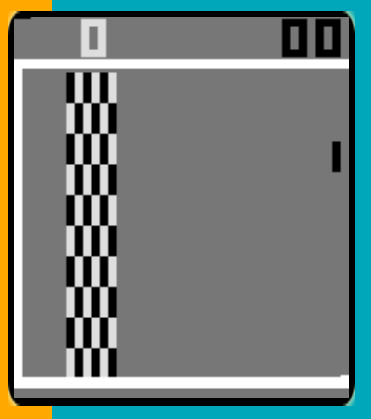
Handball: 2 or 4 players compete on this realistic video handball game with the "whammy" feature option to add to the challenge.

Volleyball: 2 or 4 players compete in teams to get the ball over the center net with paddles that move horizontally on the screen. "Jump" feature is included.

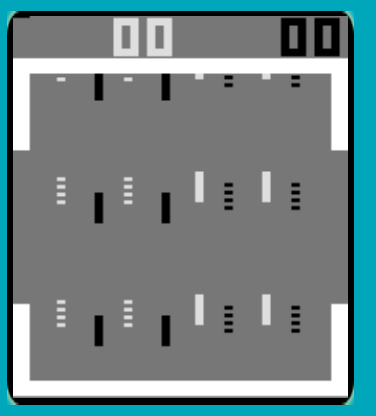
Basketball I: 2 or 4 player basketball game with a "jump" feature can be played in teams or as individuals.

Basketball II: 2 or 4 player basketball game with a "catch" feature.

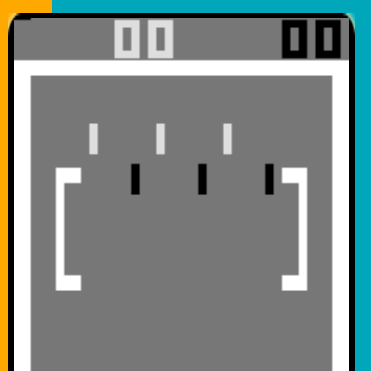
Breakout



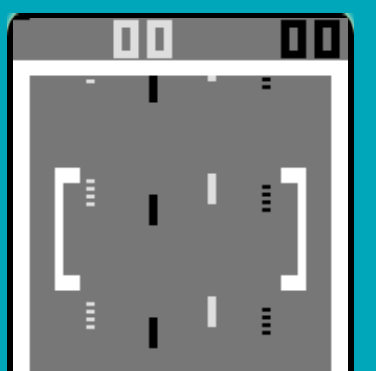
Foozpong



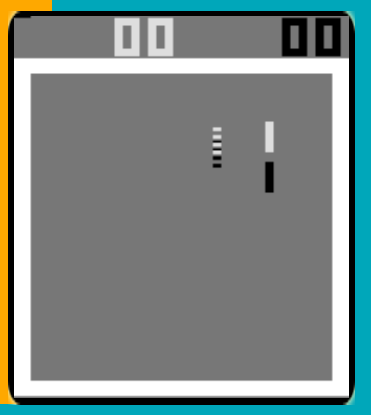
Hockey III



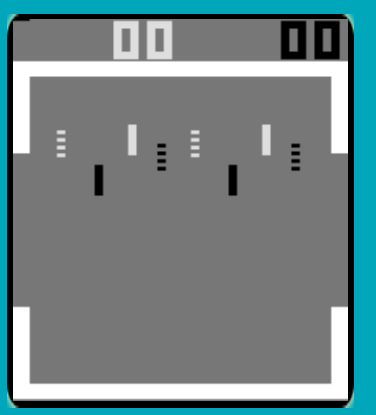
Hockey II



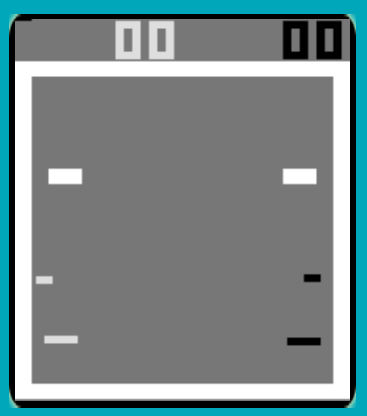
Handball



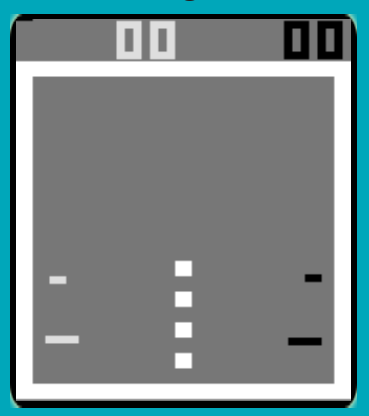
Soccer I



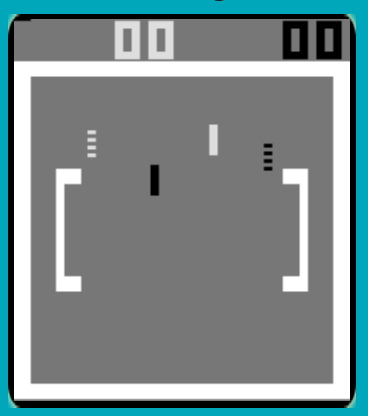
Basketball I and II



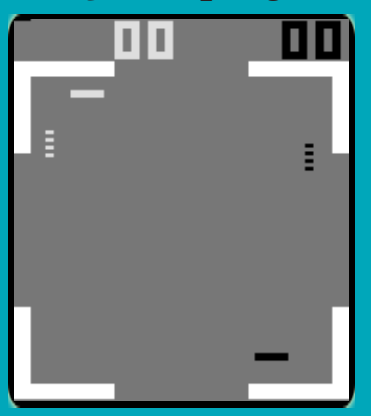
Volleyball



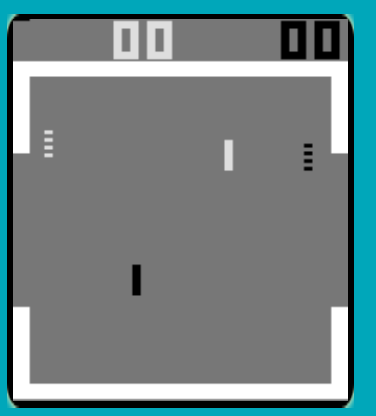
Hockey I



Quadrapong



Soccer II



Wild Wood

Manufacturer *Sega*
Release *1978*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Variety

Manufacturer *US Billiards*
Release *1978*
Genre *Breakout*
Cabinet Styles *Cocktail*

excerpt from the flyer:

- 1, 2, 3 or 4 Players
- Free Game
- 19” Motorolla Monitor
- Electrical Counter
- Isolated Cash Box
- Slip-Clutch Potentiometers
- Attractive All Mica Cabinet
- Durable Construction
- Hinged, Locked Top Opens for Service

Wall Block

Manufacturer *Taito*
Release *1978*
Class *Wide Release*
Genre *Ball and Paddle*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

Seen described as “tabletop form-factor block game machine”.

Wolf Pack

Manufacturer *Atari*
Release *1978*
Class *Prototype*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Cabinet Styles *Upright*

Ultra Tank

Manufacturer *Kee Games*
Release *1978*
Class *Wide Release*
Genre *Shooter*
Board pin *Ultra Tank Pinout*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *2-way (up, down)*
Joystick: *2-way (up, down) with button [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White 19-inch Wells-Gardner*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Ultra Tank is the final game in Atari's Tank series, which would soon be eclipsed by the 1980 game Battlezone. It's also the last game Atari released under the "Kee Games" facade.

Two tanks face off in a maze of blocks. Besides dodging the bullets shot by the opponent, players must also avoid running into mines. After the game timer expires, the player with the highest score wins.

The game is similiar to Tank except the battlefields can be open or have mines and barriers and the tanks can be visible or invisible depending on how the options are selected.

excerpt from the manual:

Ultra Tank® is a one- or two-player tank battle game developed by Kee Games. The game is contained in an upright cabinet which is illustrated with brightly colored graphics to enhance player appeal. A 19-inch black-and-white TV monitor is mounted in the top front of the cabinet, with the viewing screen tilted slightly from a vertical position.

A player control panel is mounted directly below the TV monitor viewing screen on the front of the game cabinet. The controls consist of two sets of levers or joysticks, with a pushbutton switch mounted on top of the right joystick of each set. The control panel also includes a START button for each player, and three option toggle switches for one or both players to select from.

The player's objective is to shoot the opponent's tank while maneuvering his or her own tank to avoid oncoming shells. Players also have to contend with barriers, mines, and boundaries, which are stationary. A hit made on an opponent's tank adds one point to a player's score. If a player's tank runs into a mine, one point is added to the opponent's score.

excerpt from the flyer:

THE ULTIMATE TANK GAME. Ultra Tank brings more new play strategy options and a new one-player version to the all-time favourite Tank™ game.

New Options Make Ultra Tank Eight Games in One!

Players *choose* the game they play. Three player-select switches offer almost unlimited variations - **AND** *the options can be changed during the game.*

1. **"Visible" or "Invisible" tanks**

The new strategy of camouflage can be added by selecting "Invisible Tanks," where the tanks are seen only when the shells are fired. Or players can choose to play with the tanks always visible.

2. **"Open Battlefield" or "Barriers & Mines"**

Players can select an open battle-field where fast manoeuvring of the tanks to avoid being hit is a major part of the action.

Or the challenge of barriers and mines can be selected to add obstacles and the element of danger to the game play.

3. **"Rebounding" or "Guided" shells**

Players can choose to fire shells that will ricochet against barriers and walls, or shells that can be guided with the player controls to chase the opponent.

Unlimited Replay.

Different combinations of these options give you eight unique games for more player competition. Players can choose any of the options to play with exactly the action features they prefer - makes each Ultra Tank game a *new* game every time it's played.

One or Two Players - New "Robot" Tank Feature!

New Ultra Tank offers an all new one-player game against the **computer** for extra profit opportunities, as well as the exciting two-player version.

More Realism, More Challenge!

New Ultra Tank features larger tanks and greater tank manoeuvrability. There are fully independent left and right track controls for easyturning, forward and backward movement. Shells are fired using a simple fire button on the control handle.

New Profit Options.

Game Time is operator adjustable to 60, 90, 1210, or 150 seconds.

Coin Modes: 1 coin per player, 1 coin for 2 players, 2 coins per player, or free play for display and demonstration.

Extended Play can be awarded determined by operator-selectable high score levels.

Built to Take It.

Rugged construction, Durastress™ tested solid-state circuitry means long-term reliability.

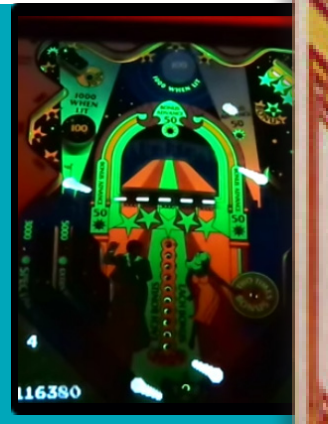
And Atari's built-in *self-test diagnostic system* with easy access switch means quick, easy troubleshooting.

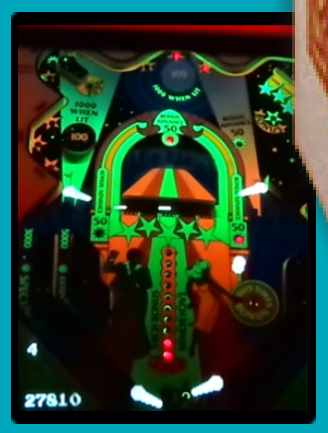
Ultra Tank, Ultra Profits.

Make the player's choice *your* choice. Get the data now from your Atari distributor.

Video Pinball

Manufacturer *Atari*
Release *1978*
Class *Wide Release*
Genre *Pinball*
Board pin *Video Pinball Pinout*
Mode *4 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *2 [Left FlipperRight Flipper] Pinball Plunger*
Other : *[Pushing down on the control panel simulates a nudge effect on screen]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Image is reflected into a mirror
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Atari Video Pinball was the first simulation of pinball on a video screen. Video Pinball uses the 6502 CPU and the program is stored on proms rather than eproms. The game consists of a miniature raised foam playfield mounted to the roof of the cabinet complete with a few dozen flashing red LED lamps. The bottom half of the cabinet features a 23” monitor with the tube pointed upward. Sandwiched in between is a smoked two-way mirror. Behind that, a black light to illuminate the playfield. The image from the playfield is then reflected into the mirror while the monitor’s image of a moving ball and drop targets shine through, creating the illusion of playing a live action pinball machine. The control panel consists of a plunger with an optic board attached, flipper buttons on each side and a spring loaded pressure switch for a nudge effect. It really does come about as close to pinball as you can get without actually using parts like coils, solenoids or even a ball for that matter. Being from 1978, it has the standard sounds, pop bumpers, drop targets, rollovers, special lanes and so on, all with a disco style theme. The playfield even features disco dancers.

Since the arcade version of Video Pinball, there have been tens, if not hundreds, of translations of pinball to the video realm. Some version of pinball has been released for just about every home system since the 1970s.

Atari released an “official”home version of Video Pinball for the Atari 2600 in 1980. It lacks just about everything that makes the arcade version fun. The horizontal aspect ratio of the screen and the anti-gravity movement of the ball makes this a boring and unrealistic pinball game.

“outerworldarcade.com”
“keithsarcade.com”

The excitement of pinball, the popularity of video... an irresistible new action combination.

Video Pinball™ is another Atari *first*! Now you can swing to a new profit beat. It's the world's first video game to simulate the action and color of pinball... in a compact cabinet size designed to locate virtually anywhere.

Video Pinball combines a three-dimensional "Disco" PLAYFIELD, with video BALL, FLIPPERS, and DROP TARGETS. Video play action also features SLING SHOTS, THUMPERS and ROLLOVERS.

The result is a totally new visual experience... and an exciting new game play challenge.

New excitement for 1 to 4 players.
Through the magic of mirrors, video images of the ball, flippers and drop targets are superimposed on an actual 3-dimensional blacklight playfield. Play begins with a pull of the plunger. From then on it's exciting pinball all the way... 2 sets of flippers, high scoring objectives, fast ball action, a playfield challenge that demands replay!

Realistic scoring rewards.
"Extra Ball", "Specials", "Extra Games", "Bonuses" can be achieved as in a regular pingame.

LEDs light the way.
Colorful LED lights flash on the playfield dramatically illuminating various score objectives as they are accomplished.

Special "Nudge" feature.
Players can "nudge" the ball by pushing down on the control panel adding the realistic "feel" of pinball action.

Bult-in Self-Test System.
Atari's unique self-test program displays all micro-processor functions for on-the-spot trouble-shooting.

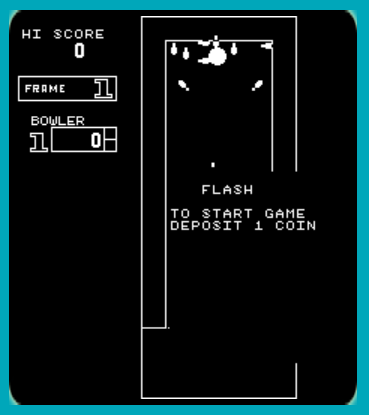
4 Player Bowling Alley

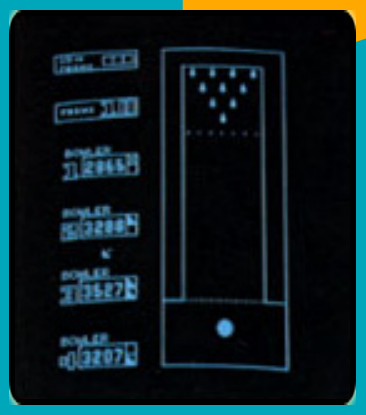
Manufacturer *Midway*
Release *1979*
Class *Wide Release*
Genre *Sports*
Mode *4 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

The game features an overhead view of a bowling lane. Players can select either flash or regulation bowling and also choose between either straight or hook shots. The game displays “Beer Frame” on the fifth and tenth frames. Players use a trackball to roll a bowling ball towards 10 pins in the hopes of knocking over as many as they can.

The cocktail version is oval shaped to accomodate a vertically oriented monitor and the long bowling alley. It is labeled simply “Bowling Alley” and has a copyright date of 1979. Trackballs are mounted on boths ends of the machine.

“arcade-museum.com”





excerpt from the Cocktail flyer:

Striking design and compact size that opens the doors to more locations. The “sit-down” game with a 19” monitor flip-flop screen has all the fun, skill and excitement features of Midway’s upright arcade model.

DIMENSIONS:
Height: 29” (75.63 cm)
Depth: 32” (81.25 cm)
Width: 22” (55.86 cm)

excerpt from the Upright flyer:

Strike it rich with this super attraction that features a choice of two play fields on a big 23” monitor screen. Realistic sound and pin action add to the excitement enjoyed by 1 to 4 players throughout the 10 frame game period.

DIMENSIONS:
Height: 72 1/2” (184 cm)
Depth: 28 1/2” (72 cm)
Width: 38 1/2” (97 cm)

Astro Battle

Manufacturer *Sidam*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

An alien invader shooter from Sidam.

Alien Invader

Manufacturer *Universal*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

Alien Invader is a space side-to-side shooting game that is very similar to Galaxian. However, as last alien leaves the “rack”, it transforms into a larger bat-like creature as it swoops down.

Leaving certain types of aliens at the end of each rack would produce two “bat” creatures instead of just one in the higher levels.

“arcade-museum.com”

Amusement Keno

Manufacturer *Sircoma/A-1 Supply*
Class *Wide Release*
Genre *Casino*
Cabinet Styles *Upright*

excerpt from the flyer:

The Chinese game of KENO played on a colorful screen.
Players mark numbers on the screen by using our new “light-pen” Four to ten spots can be played and marks can be changed before “play” button is pushed.
The full color screen changes color for a drawn numbers.

Asteroids

Manufacturer *Atari*
Release *1979*
Class *Wide Release*
Genre *Space*
Board pin *Asteroids Pinout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3*
[FireThrustHyperspace]
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
19-inch Electrohome G05-802/805
Sound *Unamplified Mono*
(requires one-channel amp)
Cabinet Styles *Upright*
Cocktail
Mini

Asteroids is an arcade space shooter released in November 1979 by Atari, Inc. and designed by Lyle Rains, Ed Logg, and Dominic Walsh.

The objective of Asteroids is to destroy asteroids and saucers. The player controls a triangular ship that can rotate left and right, fire shots straight forward, and thrust forward. Once the ship begins moving in a direction, it will continue in that direction for a time without player intervention unless the player applies thrust in a different direction. The ship eventually comes to a stop when not thrusting. The player can also send the ship into hyperspace, causing it to disappear and reappear in a random location on the screen, at the risk of self-destructing or appearing on top of an asteroid.

Each level starts with a few large asteroids drifting in various directions on the screen. Objects wrap around screen edges – for instance, an asteroid that drifts off the top edge of the screen reappears at the bottom and continues moving in the same direction. As the player shoots asteroids, they break into smaller asteroids that move faster and are more difficult to hit. Smaller asteroids are also worth more points. Two flying saucers appear periodically on the screen; the "big saucer" shoots randomly and poorly, while the "small saucer" fires frequently at the ship. After reaching a score of 40,000, only the small saucer appears. As the player's score increases, the angle range of the shots from the small saucer diminishes until the saucer fires extremely accurately. Once the screen has been cleared of all asteroids and flying saucers, a new set of large asteroids appears, thus starting the next level. The game gets harder as the number of asteroids increases until after the score reaches a range between 40,000 and 60,000. The player starts with 3 lives after a coin is inserted and gains an extra life per 10,000 points. When the player loses all their lives, the game ends.

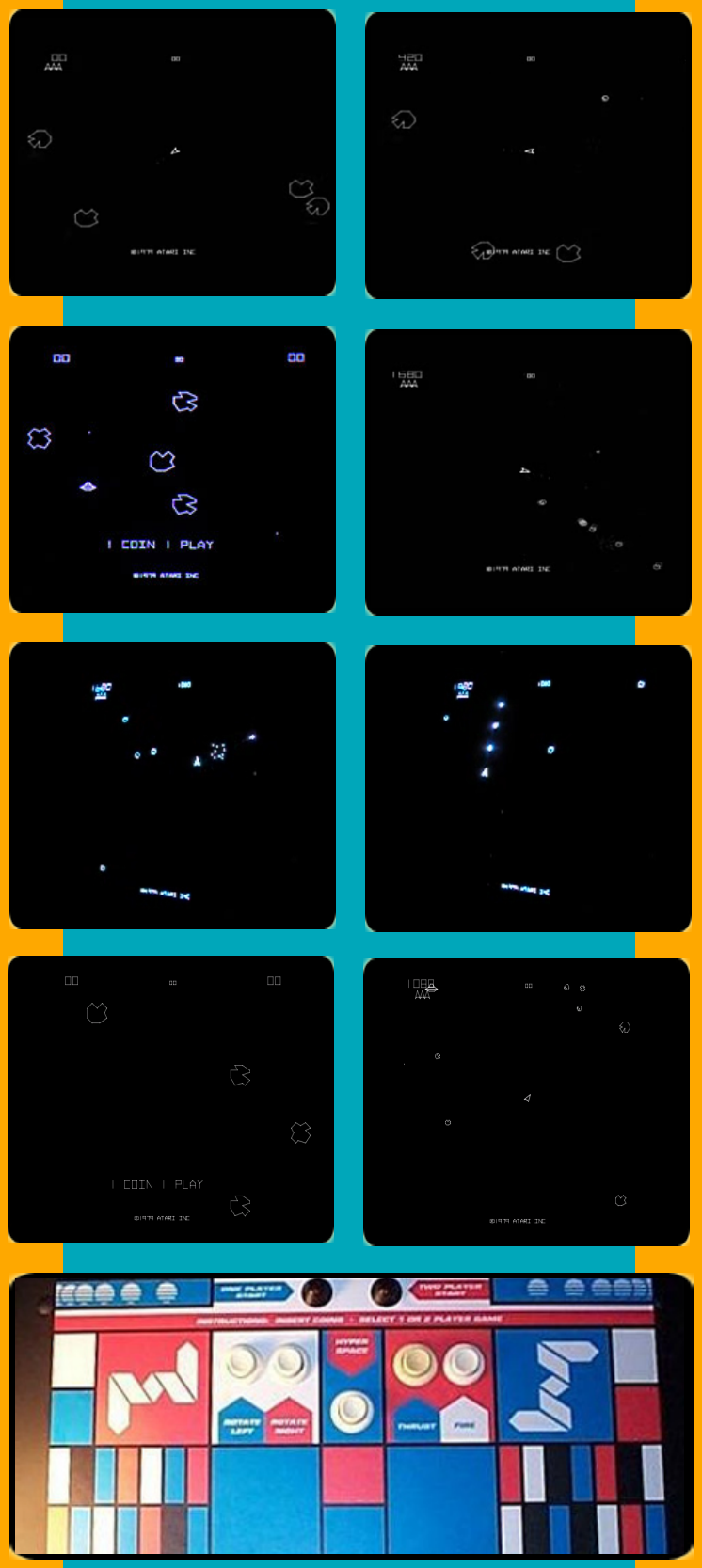
Asteroids contains several bugs. The game slows down as the player gains 50-100 lives, due to a programming error in that there is no limit for the permitted number of lives. The player can "lose" the game after more than 250 lives are collected.

Asteroids was conceived by Lyle Rains and programmed by Ed Logg with collaborations from other Atari staff. Logg was impressed with the Atari 2600 (then known as "Atari Video Computer System") and joined Atari's coin-op division and worked on Dirt

Bike, which was never released due to an unsuccessful field test. He developed Super Breakout after hearing that Nolan Bushnell wanted Breakout updated. Paul Mancuso joined the development team as Asteroids' technician and engineer Howard Delman contributed to the hardware. During a meeting in April 1979, Rains discussed Planet Grab, a multiplayer arcade game later renamed to Cosmos. Logg did not know the name of the game, thinking Computer Space as *"the inspiration for the two-dimensional approach"*. Rains conceived of Asteroids as a mixture of Computer Space and Space Invaders, combining the two-dimensional approach of Computer Space with Space Invaders' addictive gameplay of *"completion"* and *"eliminate all threats"*. The unfinished game featured a giant, indestructible asteroid, so Rains asked Logg: *"Well, why don't we have a game where you shoot the rocks and blow them up?"* In response, Logg described a similar concept where the player selectively shoots at rocks that break into smaller pieces. Both agreed on the concept.

Asteroids was implemented on hardware developed by Delman and is a vector game. Rains initially wanted the game done in raster graphics, but Logg, experienced in vector graphics, suggested an XY monitor because the high image quality would permit precise aiming. The hardware is chiefly a MOS 6502 executing the game program, and QuadraScan, a high-resolution vector graphics processor developed by Atari and referred to as an "XY display system" and the "Digital Vector Generator (DVG)".

The original design concepts for QuadraScan came out of Cyan Engineering, Atari's off-campus research lab in Grass Valley, California, in 1978. Cyan gave it to Delman, who finished the design and first used it for Lunar Lander. Logg received Delman's modified board with five buttons, 13 sound effects, and additional RAM, and used it to develop Asteroids. The size of the board was 4 by 4 inches, and it was "linked up" to a monitor.



Logg modeled the player's ship, the five-button control scheme, and the game physics after Spacewar!, which he had played as a student at the University of California, Berkeley, but made several changes to improve playability. The ship was programmed into the hardware and rendered by the monitor, and was configured to move with thrust and inertia. The hyperspace button was not placed near Logg's right thumb, which he was dissatisfied with, as he had a problem *"taking his hand off the thrust button"*. Drawings of asteroids in various shapes were incorporated into the game. Logg copied the idea of a high score table with initials from Exidy's Star Fire.

The two saucers were formulated to be different from each other. A steadily decreasing timer that shortens intervals between saucer attacks was employed to keep the player from not shooting asteroids and saucers. The minimalist soundtrack features a "heartbeat" sound effect, which quickens as the game progresses. The game did not have a sound chip, so Delman created a hardware circuit for 13 sound effects by hand which was wired onto the board.

A prototype of Asteroids was well received by several Atari staff and engineers, who would *"wander between labs, passing comment and stopping to play as they went"*. Logg was often asked when he would be leaving by employees eager to play the prototype, so he created a second prototype specifically for staff to play.

Atari went to Sacramento, California for testing, setting up prototypes of the game in local arcades to measure its potential success. The company also observed veteran players and younger players during focus group sessions at Atari itself. A group of old players familiar with Spacewar! struggled to maintain grip on the thrust button and requested a joystick, whereas younger players accustomed to Space Invaders noted they get no break in the game. Logg and other Atari engineers observed proceedings and documented comments in four pages.

The first Asteroids cabinets used a different coin-door. The quarters were placed through one of two round openings large enough for the quarter to fit through. The quarter is placed flat against a wall just inside the opening and released. The quarter drops down for a credit. The display showing the cost of a credit is labeled between the two coin openings. The lettering describing the game play is also in yellow instead of white on the monitor overlay.

Asteroids was immediately successful upon release. It displaced Space Invaders by popularity in the United States and became Atari's best selling arcade game of all time, with over 70,000 units sold. Atari earned an estimated $150 million in sales from the game, and arcade operators earned a further $500 million from coin drops. Atari had been in the process of manufacturing another vector game, Lunar Lander, but demand for Asteroids was so high *"that several hundred Asteroids games were shipped in Lunar Lander cabinets"*. Asteroids was so popular that some video arcade operators had to install large boxes to hold the number of coins spent by players.

The saucer in the original game design was supposed to take a shot as soon as it appeared. This action was altered so there would be a delay before the saucer shoots, leading to "lurking" from players. Lurking is a strategy in which the player uses thrust to keep the ship in motion, leaves 1 or 2 asteroids undamaged, and hunts for saucers, allowing the player to pick off as many 1,000-point UFOs as possible and play indefinitely on a single credit. Since the saucer could only shoot directly at the player's position on the screen, the player could "hide" at the opposite end of the screen and shoot across the screen boundary, while remaining relatively safe. Complaints from operators losing revenue due to lurking led to the creation of an EPROM restricting such chances. Usage of the names of Saturday Night Live characters "Mr. Bill" and "Sluggo" to refer to the saucers in an Esquire article about the game led to Logg receiving a cease and desist letter from a lawyer with the "Mr. Bill Trademark."

Asteroids received positive reviews from video game critics and has been regarded as Logg's magnum opus. Brett Alan Weiss, writing for Allgame, likened the monochrome vector graphics to minimalism and viewed its sound effects as memorable. Weiss found its overall design to be near-perfect and cites the intensity and controls as elements that make the game addicting. He admitted the game is easily understandable and *"holds up extremely well over time"*. William Cassidy, writing for GameSpy's "Classic Gaming", noticed its innovations, including being one of the first video games to track initials and allow players to enter their initials for appearing in the top 10 high scores, and commented, *"the vector graphics fit the futuristic outer space theme very well."* In 1996, Next Generation listed it as number 39 on their "Top 100 Games of All Time", particularly lauding the control dynamics which require *"the constant juggling of speed, positioning, and direction."* Asteroids was ranked fourth on Retro Gamer's list of "Top 25 Arcade Games"; the Retro Gamer staff cited its simplicity and the lack of a proper ending as allowances of revisiting the game. In 2012, Asteroids was listed on Time's All-TIME 100 greatest video games list. Entertainment Weekly named Asteroids one of the top ten games for the Atari 2600 in 2013. It was added to the Museum of Modern Art's collection of video games. By contrast, in March 1983 the Atari 8-bit port won sixth place in Softline's Dog of the Year awards *"for badness in computer games"*, Atari division, based on reader submissions.

The gameplay in Asteroids was imitated by many games that followed, mostly "Asteroid clones". By December 1981 BYTE observed that *"If imitation is the sincerest form of flattery, then [Atari's Asteroids has] a lot to be proud of ... Its popularity has inspired numerous imitations"*, including eight for personal computers. The Mattel Intellivision title Astrosmash was conceived as Avalanche! after Meteor! did not take up the cartridge's entire ROM space. Meteor!, an Asteroids clone, was cancelled to avoid a lawsuit and Avalanche! was released as Astrosmash. The resultant game borrows elements from Asteroids and Space Invaders, both which also influenced Defender and Gravitar, two popular and often cloned arcade games. Quality Software's Asteroids in Space (1980), another Asteroids clone, was one of the best selling games for the Apple II and was voted one of the most popular software titles of 1978-80 by Softalk magazine.

Others clones include Acornsoft's Meteors, Moons of Jupiter for the VIC-20, MineStorm for the Vectrex. Apple-Oids is a 1980 clone for the Apple II, with asteroids in the shape of apples.

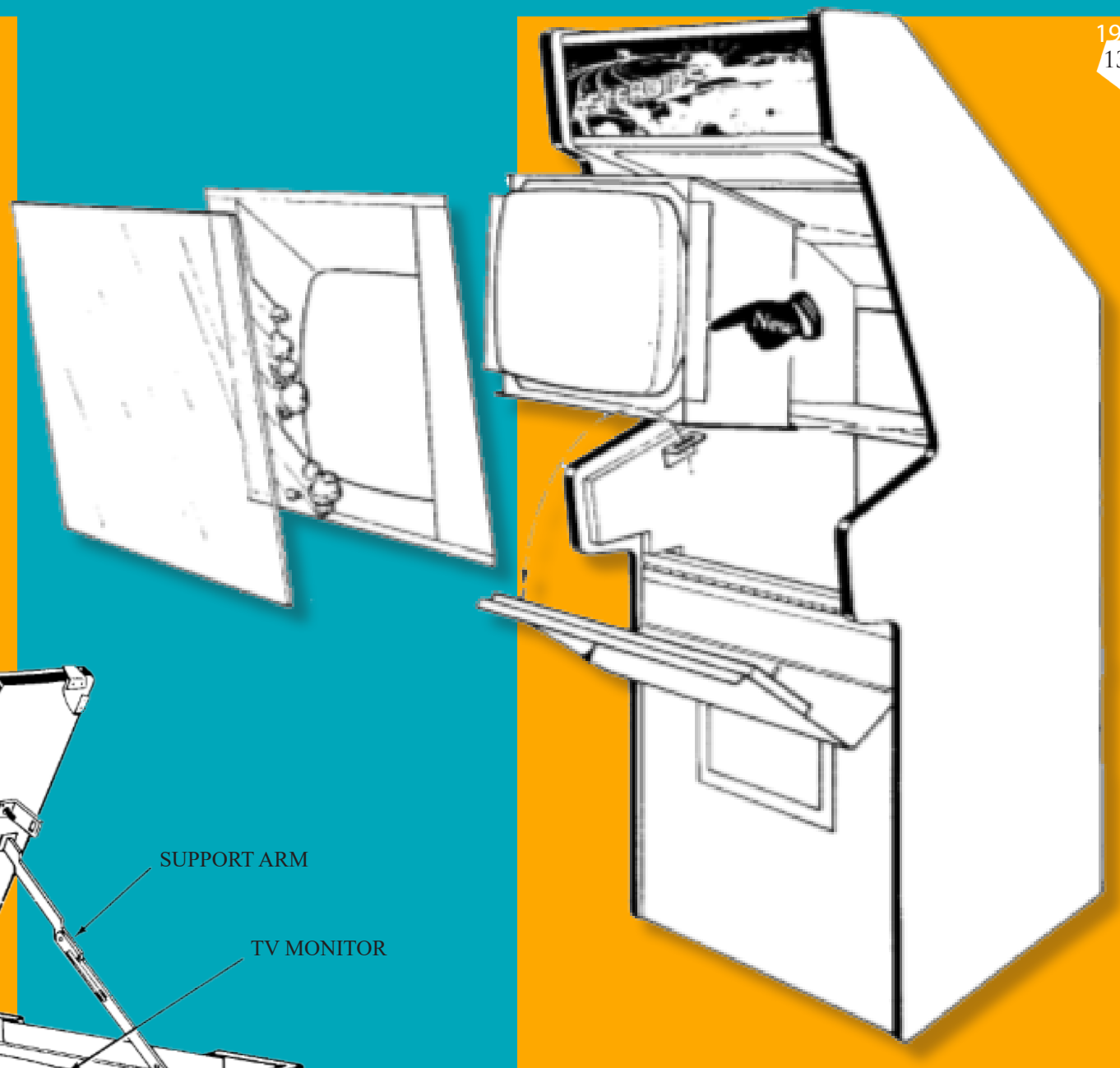
Asteroids has been ported to multiple platforms, including much of Atari's hardware (Atari 2600 and 8-bit computers in 1981, Atari 7800 in 1987, Atari Lynx in 1994) and many other platforms. Released in 1981, the 2600 port was the first game to use bank switching, a technique developed by Carl Nielsen's group of engineers that increased available ROM space from 4 KB to 8 KB.

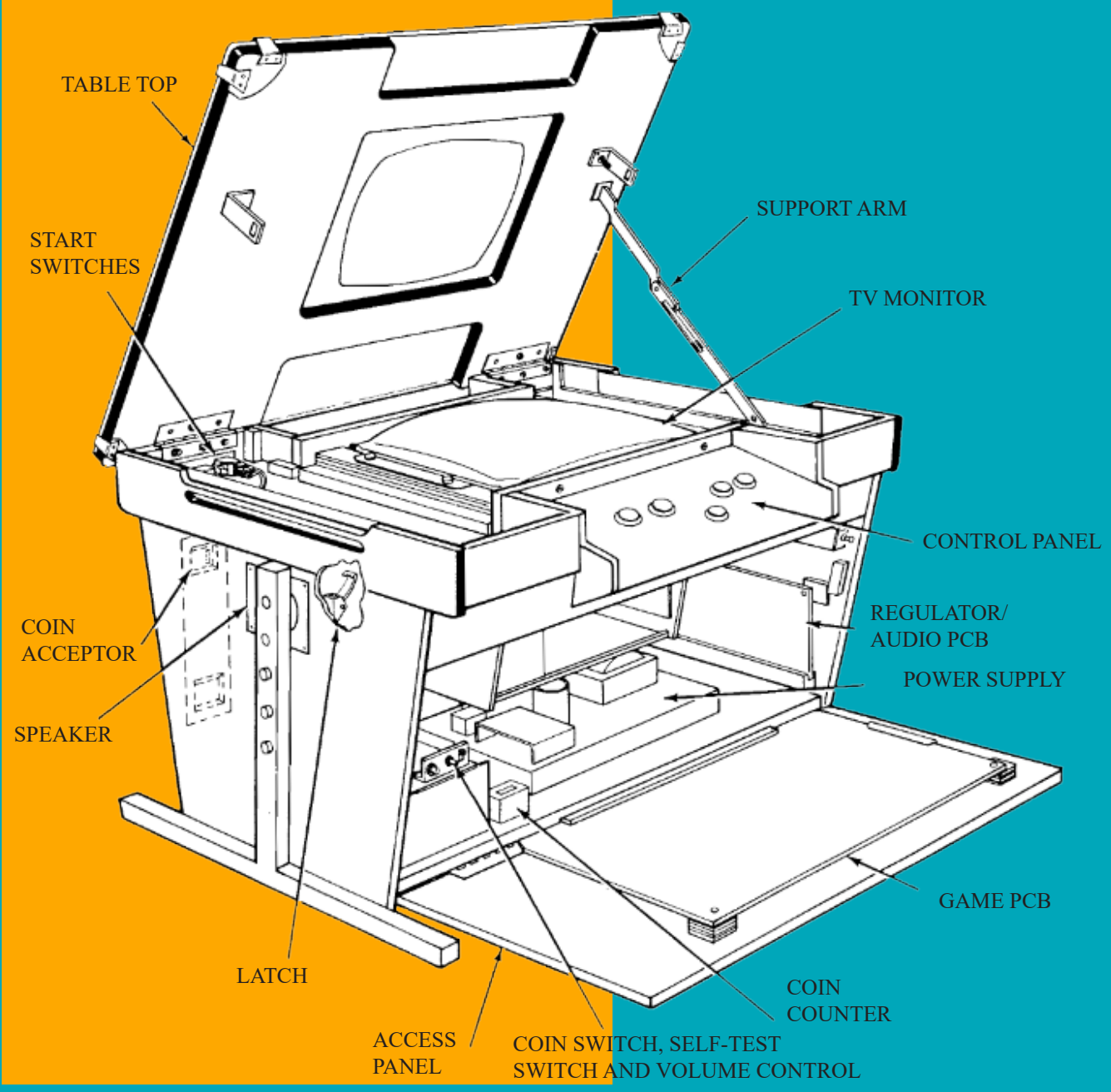
On November 13, 1982, 15-year-old Scott Safran of Cherry Hill, New Jersey, set a world record of 41,336,440 points on the arcade game Asteroids, beating the 40,101,910 point score set by Leo Daniels of Carolina Beach on February 6, 1982. In 1998, to congratulate Safran on his accomplishment, the Twin Galaxies Intergalactic Scoreboard searched for him for four years until 2002, when it was discovered that he had died in an accident in 1989. In a ceremony in Philadelphia on April 27, 2002, Walter Day of Twin Galaxies presented an award to the surviving members of Safran's family, commemorating the Asteroid Champion's achievement. On April 6, 2010, John McAllister broke Safran's record with a high score of 41,338,740 in a 58-hour Internet livestream.

excerpt from the Cocktail manual:

The Cocktail Asteroids game has four new parts. If you have worked on Atari games in the past, then you should be aware of these important differences.

- Power Supply Assembly.
- Game PCB Circuity and TV Monitor. Most video games to date have used the raster scan method of display. This game uses vector generation with X and Y axes to allow greater contrast, a greater number of moving objects on the screen, and lines at any angle to be "drawn" on the screen.
- Cocktail Table Cabinet. This new cabinet design allows for adjustable height and easy access for servicing.
- Coin Acceptor. This is the first use of this fixed mounting coin acceptor.





excerpt from the manual:

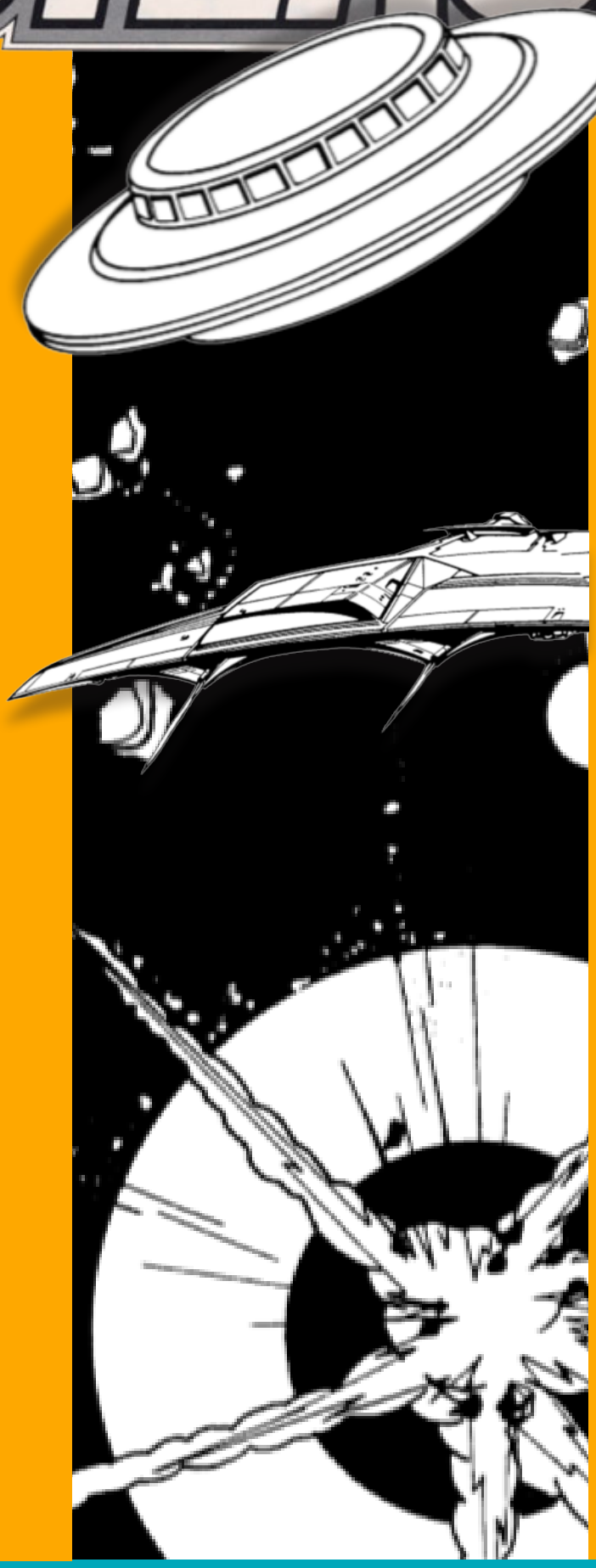
Atari's Asteroid game has five possible modes of operation: Attract, Ready-to-Play, Play, High Score Initial, and Self-Test. Self-test is a special mode for checking the game switches and computer functions. You may enter this mode at any time. When entered, all game credits are cancelled.

The attract mode begins when power is applied to the game, after a play or high score initial mode, or after self-test.

The Ready-to-Play mode begins when sufficient coins have been accepted for a one- or two-player game. It ends when the 1 PLAYER or 2 PLAYER START pushbutton is pressed.

The play mode begins when either start pushbutton is pressed. The mode ends when the player's last ship of the game is lost.

ASTEROIDS™



excerpt from the flyer:

Atari Space™ introduces another new space action blockbuster. A new concept that challenges one or two players to compete with themselves or against an opponent for highest score.

Asteroids is easy to learn but hard to master - a replay natural! The better your players become, the more difficult Asteroids gets. People keep playing to better their previous scores.

Players start with either three or four ships. The object of the game is to maneuver a spacecraft quickly enough to blast and destroy streams of asteroids and computer-controlled enemy saucers - before they can destroy the player's ship.

A direct hit on a large asteroid breaks it in two. A hit on one of these breaks it into two still smaller asteroids, a final hit on a small asteroid destroys it completely.

When the number of asteroids is minimal, a saucer will enter. As the game progresses, more enemy saucer will appear more frequently.

Large saucers shoot in random directions. Small spacecraft will zero in on player's craft. When all asteroids have been destroyed, a new cluster of large asteroids will appear.

Realistic Controls.
Push-button controls are provided for *rotation*, left or right, *thrust* and *fire control*. Activation of the "Hyperspace" button causes the spacecraft to go off screen and reappear at random in a different area. Hyperspace is risky however, because of a high probability of destruction upon reentry.

Scoring.
Small Asteroids . . . . . 100 points
Medium Asteroids . . . . . 50 points
Large Asteroids . . . . . 20 points
Large Spacecraft . . . . . 200 points
Small Spacecraft . . . . . 1,000 points

Bonus Scoring.
Each time 10,000 points are achieved an additional spacecraft is awarded.

Spectacular Visual Effects.
Realistic explosions, laser blasts, fragmentation of space debris are created by the unique Atari-designed QuadraScan™ display system. This specially developed random scan system allows more realistic animation and three-dimensional effects creating a picture with finer detail, greater resolution and smoother movement.

Exciting visuals are enhanced by highly realistic sound effects.

New High Score Table.
The current ten best scores along with player initials are displayed in the attract mode. If player's score exceeds one of the existing ten best, he or she can add that score and initials to the list.

Exclusive Operator Options.

Coinage: Free play, 1 coin per play, 1 coin per 2 plays, 2 coins per play.

Language: Operators may select English, French, German or Spanish video message presentations.

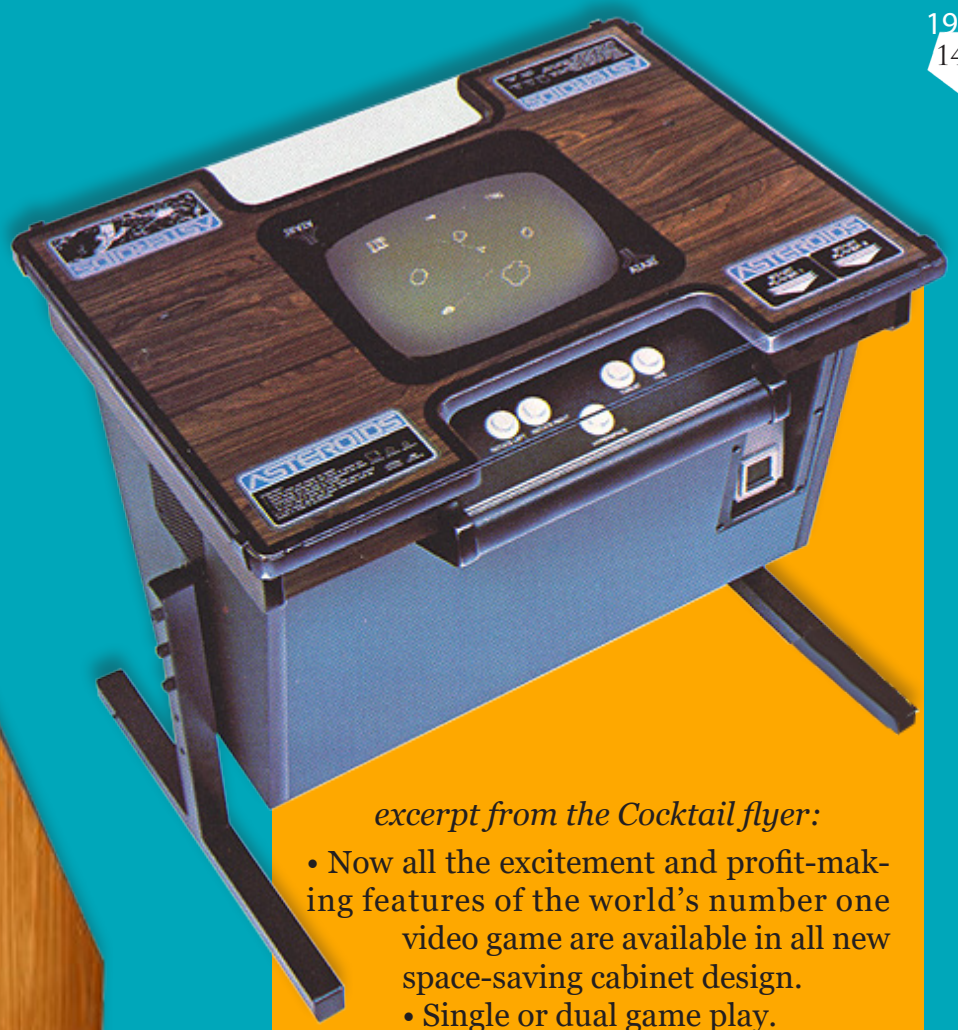
Spacecrafts: Asteroids can be adjusted to start game with 3 or 4 spacecrafts.

Built-in, Self-Test System.
Asteroids self-test diagnostic system offers light-speed trouble-shooting on the spot.

Dimensions.
Height: 71.87", 182.54 cm;
With: 25.25", 64.14 cm;
Depth: 32", 81.28 cm;
Monitor: 19" B/W

Blast Off for Higher Profits.
Get your specs on Asteroids from your Atari distributor now.

ASTEROIDS™



excerpt from the Cocktail flyer:

• Now all the excitement and profit-making features of the world's number one video game are available in all new space-saving cabinet design.
• Single or dual game play.
• TV display "flip-flops" for two players.
• 15" Atari QuadraScan™ display system.
• 3/16" tempered glass table top is insulated against spills.
• Quick-release hinged table top, hinged control panel allow easy serviceability.
• Sturdy, heavy-duty legs are adjustable to five different heights.

excerpt from the Cabaret flyer:

New Asteroids Cabaret™ is specifically designed to help expand location opportunities and player potential.

Contemporary styling, compact size and profit-proven play popularity make Asteroid Cabaret the perfect solution for a wide variety of sophisticated environments and for space-limited locations.

• Space-saving design occupies only four square feet of floor space
• Illuminated attraction panel
• Lightweight for easy mobility
• Standard two mech coin door
• Shielded monitor eliminates glare
• Rich wood grain side panelling

Specifications
Monitor: 15" QuadraScan™ B/W. Height: 55", 140 cm; WIdth: 20.5", 51 cm; Weight: 190 lbs. 86 kg.

Taito version

Hyperspace

Manufacturer *Rumiano*
Release *1979*
Class *Wide Release*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Cabinet Styles *Upright*

Hyperspace is an Asteroids Clone in an Upright Cab. The game has been found in the Netherlands.

The three game ROMs are identical to Asteroids Rev.01, only the Vector ROM at position NP3 is different. The Main PCB is largely identical to the original from Atari. The PCB is labeled with “Hyperspace”. The Monitor is a Hantarex b/w XY Monitor which is very common for european B/W Vector clones at this time.

“andysarcade.de”

Planet

Manufacturer *Alpha Denshi/Alca*
Release *1979*
Class *Bootleg*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3 [Fire|Thrust|Hyperspace]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Vector*
CRT: *Black and White*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Upright*
Cocktail

Planet is a European Asteroids clone - notable for bright artwork and a Hantarex vector monitor. It is also noteworthy to mention that all “Planet” machines contain the earliest revision of the Asteroids software, while almost all actual “Asteroids” machines contain a later revision designed to discourage lurking.

Most bootleg games were circuit boards purchased from mail order houses located overseas, but Alca actually shipped entire machines.
The cocktail version was a little uncommon, it was rather unremarkable in appearance, and it was a Japanese style cocktail and not an American style one. Japanese style cocktails have metal legs, American style ones do not.

This game uses a black and white Hantarex X/Y monitor. This is unusual because it is a monitor that doesn’t exist according to Hantarex. It appears they produced the monitor under the table, as they didn’t want to officially custom produce a monitor for a bootleg game.

“passport@everything2.com”

Meteor

Manufacturer *Hoei International*
Release *1980*
Class *Bootleg*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3 [Fire|Thrust|Hyperspace]*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

The game play is exactly the same as Asteroids.

excerpt from the flyer:

New & exciting amusement game METEOR present another new extra terrestrial space adventure. A celestial game that lets one or two players fight against themselves or an opponent for the highest score.

Meteors is simple to play-hard to master! The more a player succeeds the tougher meteors become. Players continue to try and better their highest score.

• Players begin with three or four spaceships. The objective being to move a spaceship adeptly enough to shoot and disintegrate meteors and UFOs - before they have a chance to destroy the player's spaceship.
• If a meteor is shoot dead-center it is broken in two parts. If these meteors halfs are then hit again they break into meteorites.
• After the meteor number has been substantially reduced, a UFO will appear.
• Bigger UFO's will fire haphazardly. UFO's which are smaller will "lock fire" on the player's spaceship.
After all the meteors have been obliterated, a new group of large meteors will materialize.

Asterock

Manufacturer *Zaccaria/Sidam*
Release *1980*
Class *Wide Release*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *3 [Fire|Thrust|Hyperspace]*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Upright*

Asterock is a copy of Atari's Asteroids. The italian company Sidam manufactured/developed their own CPU PCB for their upright cab while still using many parts of the original Asteroids code. The cabinet was also different in some aspects. Although the color scheme was very similar to Asteroids and the bezel around the monitor was black, the game had a completely different control panel layout and -graphics. Sidam used the Electrohome G05-802, 19 inch XY b/w monitor.

The marquee and sideart are ripped off from the Atari designs. The Sidam version features a steep backwards-sloping control panel which doubles as a full width ashtray, cigarette holders are included on the lip of the panel.

Asteroide

Manufacturer *Maxenti*
Release *1980*
Genre *Space*
Cabinet Styles *Upright*

Asteroide is a copy of Atari's Asteroids. The italian company Maxenti built this cab and used parts (PCBs and Control Panel) of the clone manufacturer SIDAM who developed an own Clone of Asteroids (own PCB's and own cab) named Asterock. The color scheme on the Control Panel is the same as the original Asteroids, but has a different control panel layout and -graphics. The bezel around the monitor is black and the sideart is completely different. Maxenti used a vector monitor from Hantarex (Italy).

Atari Soccer

Manufacturer	*Atari*
Release	*1979*
Class	*Wide Release*
Genre	*Sports*
Mode	*4 Players simultaneous*
Gameplay	*Either*
Panel Layout	*Multiple Player*
Monitor	
Orientation: *Horizontal*	
Type: Raster: *Standard Resolution*	
CRT: *Black and White*	
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Cocktail*

Atari Soccer is a top-view, two- or four-player soccer game. The game was programmed by Dave Theurer, who created the classics Missile Command and Tempest as well as I, Robot and APB.

excerpt from the flyer:

New from Atari Sports™.
New Atari Soccer continues the winning tradition of the Atari Sports group. With dynamic play-again realism that simulates all the action and excitement of an actual match.

2 or 4-Player Action.
4-Player Game
In a 4 player contest, each two man team can experience the extra challenge of playing cooperatively against an opposing 2-man squad. Each team plays with 2 controllable players, 1 computer-controlled player and a computer-controlled goalie.

The right Trak-Ball controls players marked with X, the left Trak-Ball controls players marked with O.

2-Player Game
In a two-player contest, each opposing player controls one man assisted by a computer-controlled player and computer-controlled goalie.

Only the right Trak-Ball is active in this mode.

Exciting Play Option Features Challenge Players to Test Their Skills.
Kick/Pass Option. When the *player with the ball* activates the "Kick" button, the ball is released in the direction that player is facing.

When a *teammate has the ball*, activation of the "Kick" button will force the ball to be passed to the player pressing the "Kick" button.

Offside Option. Playing with the "Offsides Rule" in effect limits an offensive player from receiving a pass from a teammate unless there are at least two defensive players between him and the goal in the opponents' half of the field. Penalty: Defending team receives a free kick.

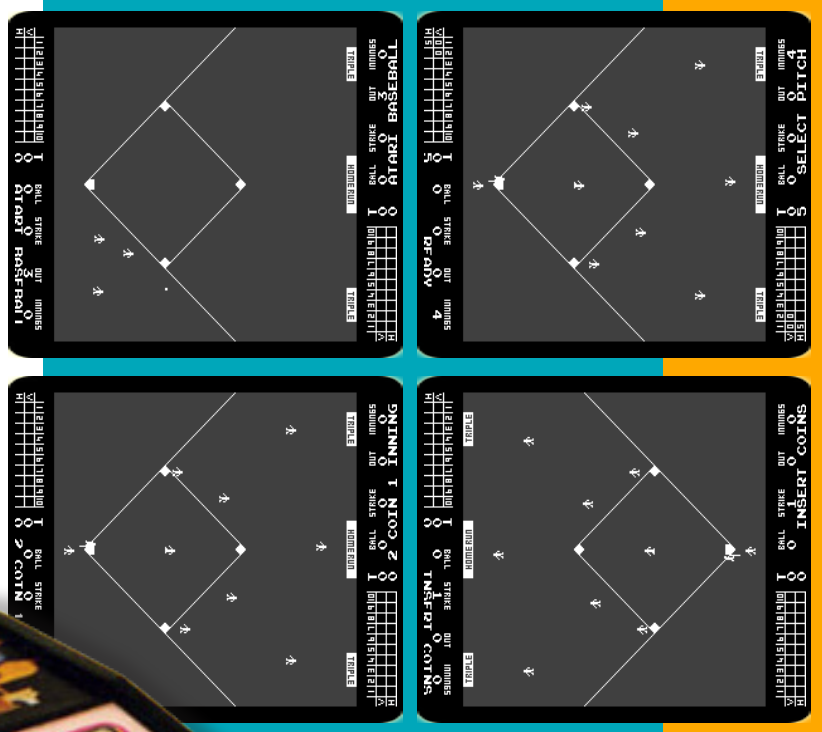
Add-A-Coin™. Each additional coin adds time-play. Players may buy extra time for longer uninterrupted action.

Scoring:
1 point is awarded per goal.

Shoot for Bigger Profits.

Atari Baseball

Manufacturer *Atari*
Release *1979*
Class *Wide Release*
Genre *Sports*
Board pin *Atari B&W Raster*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Trackball: *Optical*
Buttons: *2 [Scroll/Swing/Pitch|Select]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Cocktail*



Atari Baseball utilizes a Motorola M6502 (running up at 750 KHz), and both players must use a trackball to control their respective stick-figure team, with two buttons (one to scroll through the pitching/hitting choices, or swing the pitcher's bat, and another to make the pitcher throw the ball, or confirm a pitching/hitting choice). One credit buys a certain number of innings, depending on how the cabinet is set. Just like with real baseball, whoever has scored the most runs by the end of that ninth inning (or in this game, if neither player has another coin to continue at the end of the last paid-for inning) wins the game; if both players' scores are tied by the end of the ninth inning, the game will go to a tenth inning, but if they're still tied by the end of the tenth inning the game will end.

This was originally meant to be the first title from Atari to showcase digitized speech; Dan Pliskin had designed a speech board that featured the calls of an umpire, but the company rejected the idea.

"strategywiki.org"

excerpt from the flyer:

Players use real-life strategy. Batters can switch hit, full swing, or bunt, pitchers can try to fool the batter with a variety of pitches.

Batter up!

Atari Baseball is one of the new ultra-realistics - the new breed of video sports attractions.

Now, for the first time, players can experience the challenge and competitive excitement of playing the game so realistically that it's like being there.

Two player can challenge each other, or *one* player can test his skill against the computer.

Atari Basketball

Manufacturer	*Atari*
Release	*1979*
Class	*Wide Release*
Genre	*Sports*
Board pin	*Atari B&W Raster*
Mode	*2 Players simultaneous*
Gameplay	*Competitive*
Panel Layout	*Multiple Player*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

Basketball, released in May 1979, was notable as the first basketball video game to make use of a trackball for player movement and the first to use the angled side view which became a commonly used perspective in the basketball video games that followed.

A year earlier Atari had released Basketball for the Atari VCS (2600) and the arcade's game play is very similar to the console. The main difference between the two is the use of a Trak-Ball instead of a joystick and as one would expect the graphics and sound effects found in the arcade game are a lot better.

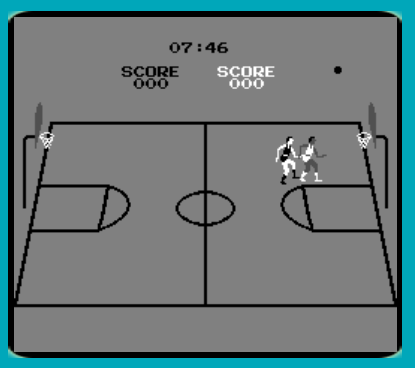
Basketball supports one and two player modes and uses a trackball to control each player's movement. At the start of each game, the song "Sweet Georgia Brown" is played. Players must first gain possession of the ball and move towards their opponent's goal. When in position for a shot, the pushbutton is held until the player's arm is at a suitable height and the button is released. Shots can be blocked by an opponent, and, when dribbling, an opponent can steal the ball. The winner is the player with the highest score when the clock runs out.

The game is known for having one of the first clearly African-American video game characters.

Michael Jackson used to own this game. It was sold at the official Michael Jackson Auction on Apr. 24th, 2009.

excerpt from the flyer:

- Another advanced sports simulation from the originator of video sports competition.
- Amazingly realistic 1 or 2 player action, scoring and sound effects offer repeat play challenge in street or arcade locations.
- "Sweet Georgia Brown" music plays at start and finish of each game, enhancing attraction and play appeal.
- Instant responsive Trak-Ball™ controls move players in any direction for exciting action, total player involvement.
- Multiple coinage options allow maximum earning versatility.



Atari Football

Manufacturer *Atari*
Release *1978/1979*
Class *Wide Release*
Genre *Sports*
Mode *4 Players simultaneous*
Gameplay *Either Control Panel*
Panel Layout *Multiple Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail (2 Player)*
Cocktail (4 Player)

In this game, the sport of American football is emulated, with players represented by Xs and Os. The game was one of the most popular arcade games in its day. Later, Atari released a more challenging four-player version programmed by Dave Theurer, the creator of Missile Command and Tempest.

Although not the first trackball game (the first was Soccer by Taito in 1973), Atari Football was the game that is credited with popularizing the trackball. Considered physically exhausting to play, Atari Football involves spinning the trackball as fast as possible to win the game. Just 90 seconds of play could result in sore palms, and longer could cause blisters. Nevertheless, Atari Football was as popular as Space Invaders during the 1978 football season, but its popularity waned later on. Atari Football is sometimes credited as one of the first games to accurately emulate sports.

On the 4-player table, the trackballs on the right side of the two control panels are for the quarterbacks, and the ones on the left side of them are for the receivers - and both types of table also have “Play Select” buttons upon their control panels, which can be used to select plays (and, in the case of the offensive team, to pass the ball to the receiver). The players must roll their trackballs in the direction they want their letters to go; they can also pass the ball by pressing the Play Select button, and tackles can be made by touching another letter, with the ball. The 4-player table also added another play for the offensive team: Punt/ Field Goal, for which the Play Select button could be used to kick the ball - and, just like in real U.S. football, a touchdown is worth 6 points while a field goal is worth 3 points, a safety and a conversion are both worth 2 points and a kicked conversion is worth 1 point. Whichever team’s scored the most points when the timer runs out wins the game.

excerpt from the 4-player flyer:

New double action excitement.
Atari 4-Player Football™ continues the winning tradition of the world-famous 2 player Atari Football™... with twice the excitement, twice the profit potential.

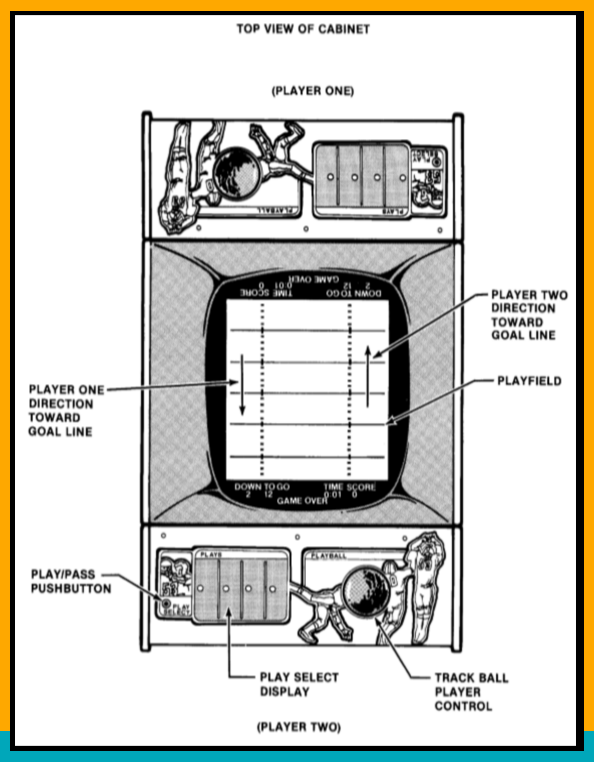
New Team Play Competition!
Atari 4-Player Football is "team" football. For the first time 2 players can experience the extra realism and challenge of playing *cooperatively* against an opposing 2-man squad.

5 new plays, including kicking!
The video gridiron sets up with a 7-man offense and a 7-man defense. Each team selects a preprogrammed play.

Offense: The offense selects one of four different pass or run option plays, or a punt or field goal. A "Multiple Pass" play can also be used by passing the ball back and forth between players behind the line of scrimmage.

Defense: The defense can elect to "blitz" or select one of four different pass/run coverage plays.

The object is to anticipate the opponent's play, then outmanoeuvre him for effective defense or offense.



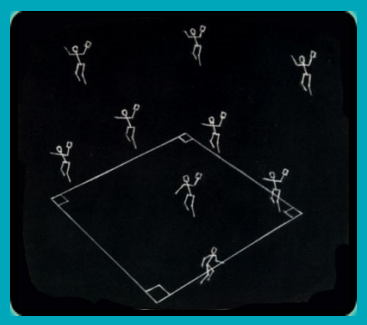
ATARI 4 PLAYER™
FOOTBALL
• World's FIRST 2 or 4 player video football attraction.
• 5 NEW plays including Field Goal, 1 or 2 point-after-touchdown conversions, and multiple pass option.
• 4 PLAYER GAME allows cooperation between teammates. *Offense* controls quarterback and one video receiver. *Defense* controls 2 defensive backs.
• 2 PLAYER GAME allows each team one controllable man. *Offense* controls quarterback. *Defense* controls one defensive back.
• New "scrimmage line" marker.
• Adjustable game time and optional coinage including new $1 coin slot.
• Add-A-Coin™ offers continuous time-play.
The Season never ends with
ATARI SPORTS™
Football, Basketball, Baseball

Ball Park

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

excerpt from the flyer:

- Solid State T.V. Monitor
- Ball and Strike Feature
- Pitch Control
- Outfielder Control
- Double Plays
- 1 or 2 Player Game
- Double Coin Chutes
- Cabinet Dimensions 64 1/2 x 26 1/2 x 23 7/8



Ball Park II

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Sports*
Mode *2 Players simultaneous*
Gameplay *Joint*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

Bomb Bee

Manufacturer *Namco*
Release *1979*
Class *Wide Release*
Genre *Pinball*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Bomb Bee is a mix of video pinball and break-out game. It is played with paddle controls. The purpose of the game is to rack up as much points as possible, through elaborate scoring mechanisms, simliar to Nintendo's Monkey Magic from the same year.

Occasionally the ball will get stuck in a very long loop (this usually happens with the pop bumpers). Players can sit back and relax while the points rack up, but eventually the game will figure out the ball is stuck and shoot it out in some other direction.

Clearing out the side sections of bricks will turn the same side pop-bumper into 100 points instead of 10. Clearing the top section of bricks will then show a 1000 point pop bumper. Hitting the 1000 point pop bumper several times will cause it to explode and a new set of bricks will show.

Get the ball to light up "N A M C O" on the screen to increase the bonus multiplier.

"arcade-museum.com"

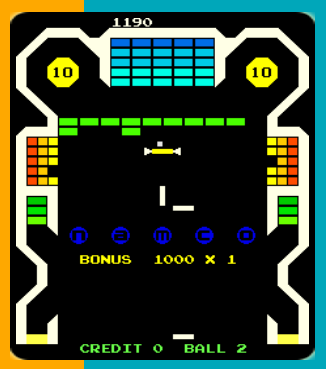
Bomb Bee N was designed to run on Nintendo arcade cabinets. The 'N' in this name indicated it was the Nintendo version.

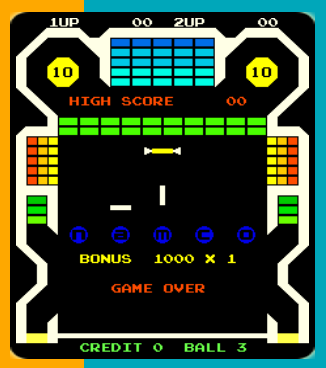
Bomb Bee-N remains the single co-operation on arcade hardware between Nintendo and Namco, until 2002 (when the companies joined forces, together with Sega, to create a shared arcade hardware platform, called Triforce.)

Bomb Bee is a historical game for several reasons. It is only the second video game produced by Namco, following the 1978 game Gee Bee, to which it was a sequel.

Both these games were designed by Touru Iwatani, creator of Pac Man. Originally he wanted to make pinball machines for Namco, but Namco did not want to do pinball so this series of games is the resulting compromise.

"beforemario.com"





Bomb Bee-N

Clay Shoot

Manufacturer	*Allied Leisure Industries*
Release	*1979*
Genre	*Shooter*
Cabinet Styles	*Upright*
	Cocktail

Clay Shoot is a clay pidgeon shooting game from Allied Leisure.

excerpt from the flyer:

Allied Leisure introduces our new video Clay Shoot, a constant action trap shoot game for 1 or 2 players. We challenge everyone to compete with themselves or against others for high scores. An easy to learn game that never stops challenging a player's skill; players will keep on playing to beat their previous scores. Players alternative shooting at one, two, or three clays, appearing at each round of play. Clays move faster or slower depending on the skill level which can be changed at the beginning of each round, and on the players success at that skill level.

GREAT VISUALS

Two men with guns, two blockhouses and a wooded canyon set the scene and the mood. Shooting 2 clays in a round doubles the points for those clays and "Great" flashes on the screen before the next round. Shooting 3 clays in a round really pays off with a big "WOW!" crowd cheers from the solid state sound system, and triple the point value. Gun shots are so realistic, you'll duck. The clay explodes when hit, and falls to the ground in pieces with a whistle.

SKILL LEVELS

Three skill levels are available on the game, and these can be changed between rounds while the game is in progress, for those who think they're getting better, or for those who whish to try for a "Sure shot."

Because the skill level can be changed during play, strategies can be worked out to take advantage of the best combination of conditions to beat the scores. Skill levels are displayed next to each player's image.

AMATEUR:

The Clays are slower the shot pattern wider, of course the point values are lowest.

EXPERT:

The next step, with slightly faster clays and slightly narrower shot pattern, point values increase.

PRO:

Is for those who think they're really hot! Narrow shot pattern and the faster moving clays mean a keen eye and quick reflexes are needed, but the rewards are the highest.

SCORING

AMATEUR ..... 75 pts/clay
EXPERT ..... 100 pts/clay
PRO ..... 150 pts/clay

Cosmic Attackers

Manufacturer	*Elcon Industries*
Release	*1979*
Genre	*Shooter*
Cabinet Styles	*Upright* *Cocktail*

Cosmic Attackers is a Space Invaders clone by Elcon Industries. The game feature two horizontal control buttons (left, right) and a fire button.

excerpt from the flyer:

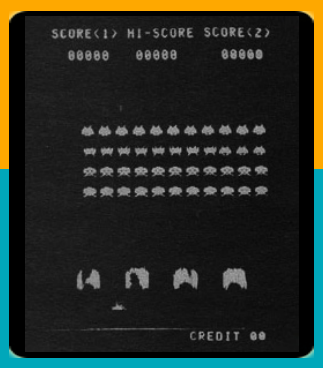
This imported Cocktail table is now available at the all-time bargain price of

ONLY $995

- Full six month warranty
- Height 24”, Weight 90 lbs., Top 32” x 21”
- Manual & schematics in English
- Replacement parts in stock

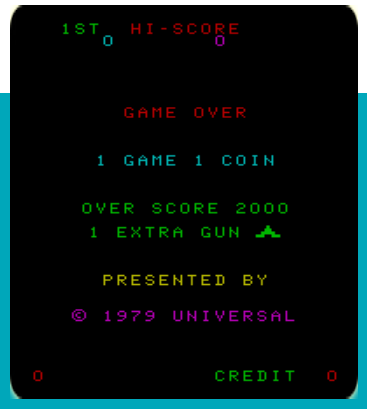
Shipped from stock $50 per game deposit required with order, or send full amount less 2% discount. Pay no freight with order of 4 or more. Order 10 or more and receive 5% discount.

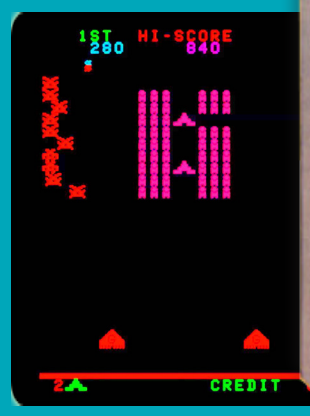
Elcon Industries also manufactures Cosmic Attackers, Collision, Super Casino Video Blackjack and Royal Flush Drawpoker.
Available in upright, wall and cocktail table models.

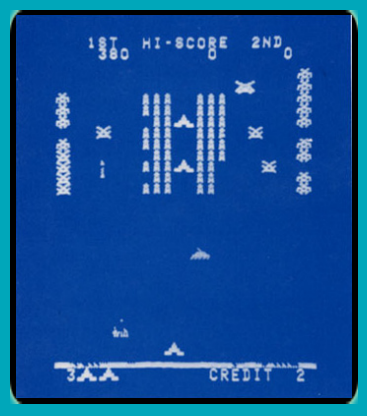


Cosmic Guerilla

Manufacturer *Universal*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Board pin *Cosmic Guerilla Dipswitch*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*



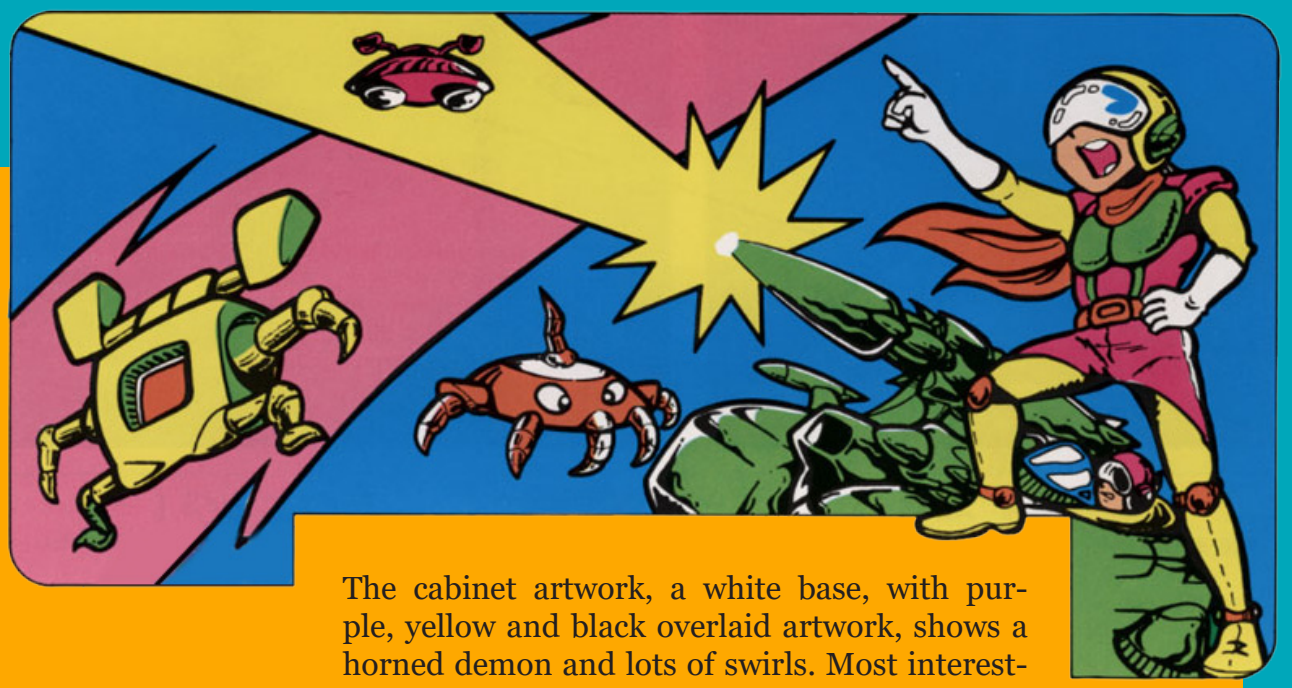




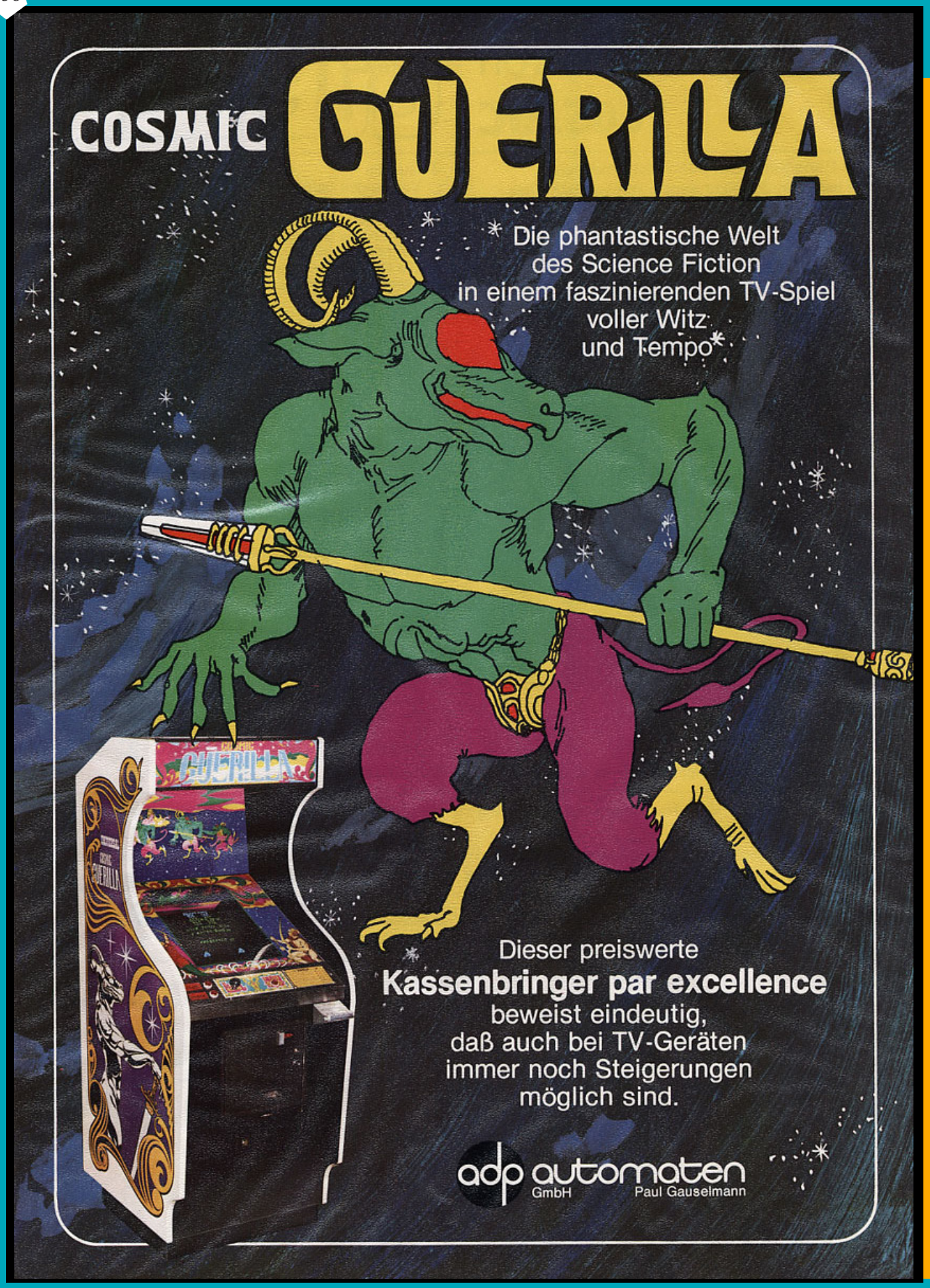
Cosmic Guerilla is a 1979 fixed shooter arcade game developed by Universal, the company that would later create Mr. Do!. A ZX Spectrum port was published by Crystal Computing in 1983.

The player takes control of a laser cannon at the bottom of the screen whose movement is limited to left and right, and must fire at the aliens above. In contrast to Space Invaders the aliens are arranged in a single vertical line on each side of the screen, with their movement being towards the centre, one or more at a time, in an attempt to capture and remove the player's shields. The aliens cannot be hit by the player's shots until they begin to move, and the player may only fire one projectile at a time.Once a row of shields has been removed, one of the player's "lives", is exposed and able to be captured. Occasionally a very fast "mothership" will appear and traverse the screen just above the player dropping bombs.

There are six levels of difficulty along with four game modes allowing combinations of the regular game, bonus enemies, and faster aliens. There is also a two player mode where players take alternative turns.



The cabinet artwork, a white base, with purple, yellow and black overlaid artwork, shows a horned demon and lots of swirls. Most interestingly, this has to be the only game to have a politically incorrect slogan plastered on the side -- “SUPER VIOLENCE!” The artwork on the sides and front was varnished or laquered, which gives it a shiny and incredibly strong coat, protecting it from scratches and any kind of fading! The control panel had backlit one- and two-player info panels. Insert one coin, “1 player” lit up insert two and “2 player” lit up.



excerpt from the flyer:

Transferred the World of Cartoons into TV Game

This attempt, probably the first such attempt in Japan was Successfully accomplished in cooperation with ISHIMORI CO.LTD. (President Mr. Shotaro Ishimori, a famous cartoonist). COSMIC GUERILLA is packed with unique ideas: the world of Cartoons comes alive as ISHIMORI'S vast experience is utilized.

Dodge the Guerilla Attack to protect your Laser Guns!!!

"THE BEST GAME ON THE MARKET"

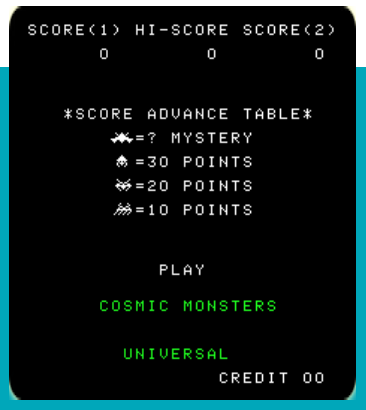
STOP PRESS

HOW TO PLAY "COSMIC GUERILLA"

1. SCORE DISPLAY - 6-digit display from 0 - 999990.
2. UFO - When hit, 50 - 300 points are scored.
3. GUERILLA - The guerilla rushes towards your block from both sides to take it away while bombing. When the block disappears, he tries to take away the central laser gun to his position.
4. BLOCK - It protects the central laser gun. if the guerilla is shot before he takes away the block, it returns to its location.
5. BASE - It is a fortress prepared to protect your laser guns against the guerilla attack.
6. LASER GUN - It is moved from side to side by controlling the lever, and by pressing the fire button, it assaults the guerilla, UFO and mutant mole.
7. CENTRAL LASER GUN - It is destroyed when taken away to the guerilla's position. Extra 1,000 - 2,000 points (adjustable by dip switches) give you another central laser gun.
8. MUTANT MOLE - It appears every time you score 500 points, attacking your laser guns.
9. CREDIT - The number of credit games is counted.

Cosmic Monsters

Manufacturer *Universal*
Release *1979*
Class *Wide Release*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail



Cosmic Monsters was a Space Invaders clone that barely strayed from the basic Invaders gameplay formula with only a few new minor features as compared to the original.

The monsters would march from side to side in formation until they reached a screen edge, dropping a notch closer to the player's(/s') laser base(s) and dropping bombs the entire time.

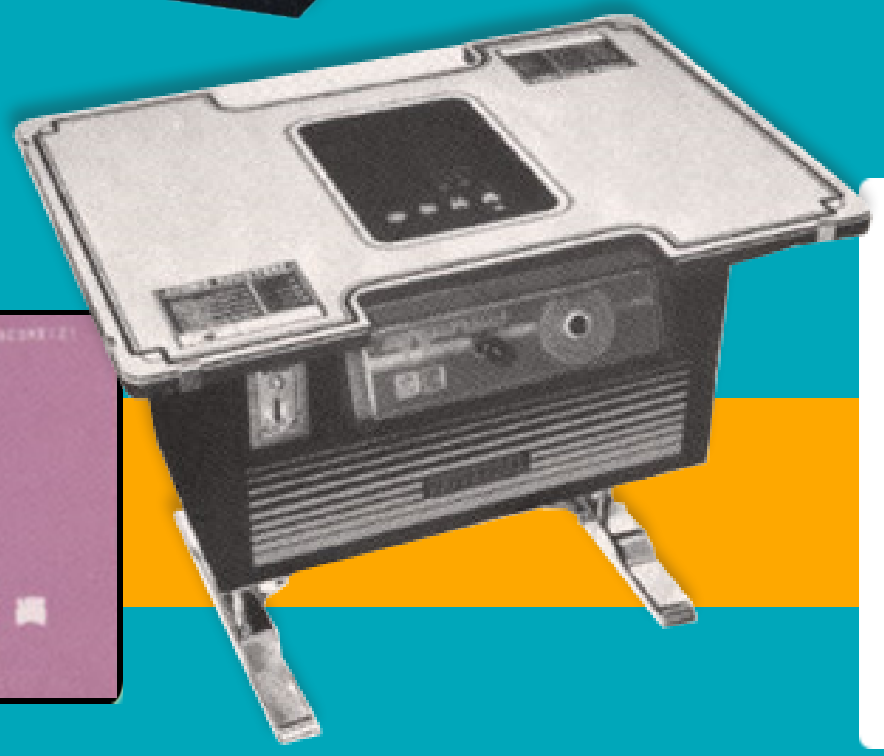
Aside from the monsters looking different (as well as the bunkers) from the original Space Invaders, the only few differences between the two games is that shooting the saucer had a higher sense of urgency this time around, as there was a bunker for it to hide inside once it appeared: if a player didn't destroy it once it came out after taking refuge in the bunker, then it would explode and add an entire new row of monsters to the top of their formation.

Also, players did not receive an extra laser base until a score of at least 3,000 points, which is pretty high for most Invaders games, and the U. F. O. was also worth way more as well, with it having a higher end value of 600-1000 points.

Scoring:
Bottom row monsters: 10 points each
Middle row monsters: 20 points
Top row monsters: 30 points
U. F. O.: random amount

"http://videogamehistory.wikia.com"

This appears to be a follow up to Cosmic Monsters.



Cosmic Monsters II

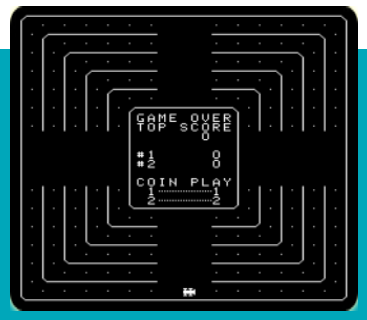
Manufacturer *Universal*
Release *1979*
Class *Concept, One-Off, or Hoax*
Genre *Space*
Gameplay *Single*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

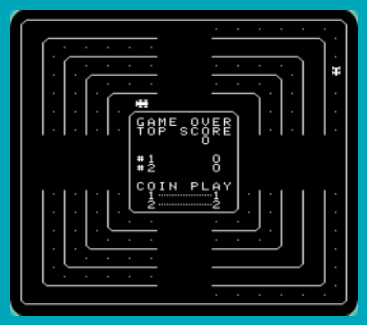
Crash

Manufacturer *Exidy*
Release *1979*
Class *Wide Release*
Genre *Racing*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up, down, left, right)*
Buttons: *1 [Fast]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a yellow overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Crash is a two-dimensional maze racing game designed and programmed by Edward Valeau of Exidy in 1979. The player "control" a car with no brakes which moves at either slow or fast speed through a maze containing dots. At the same time, one or more computer controlled cars run through the same maze in the opposite direction with the intention of ramming you. At each of four junctions in the maze, the player have the option of changing lanes to avoid the oncoming cars. The objective is to pick up all the dots before the computer takes the player out.

"mamedev.org"





The marquee is ‘reliefed’ on the monitor plexi and is all one piece that extends down to the control panel. The game name is lit using four incandescent bulbs.

The board has a number of volume controls on the sound board: motor low, motor high, tire screech, crash and more.

excerpt from the manual:

CRASH is a one or two player skill game in which players drive a car around a five lane square track while avoiding collisions with computer controlled drone cars. Players score points by driving over speed dots marked on the traffic lanes; players avoid collisions by changing lanes at the four traffic interchanges, and by using the FAST button to beat drone cars to interchanges.

CRASH has three coinage options. After the player inserts his coins, play instructions and the day’s high score appear on screen. An optional TOP THIS SCORE feature gives a replay to the player who beats a random score.

The operator selects the number of crashes (turns) per play: 2, 3, 4, or 5.

Attract Mode
When the game is first turned on, the words GAME OVER will flash on screen. Also on screen will be TODAY’S HIGH SCORE followed by a score which changes with each new higher score attained throughout the day. When the game is turned off, the high score is reset to zero.

Also displayed on screen, at the operator’s selection, will be one of the following:

COIN	PLAY
2	1

or

COIN	PLAY
1	1
2	2

or

COIN	PLAY
2	1
4	2

Crash also has a coin accumulator (credit counter) so that a player can buy a number of games in advance.

While in the attract mode (no credits, no game in progress) the game plays automatically.

Instruction Mode
When a player deposits a coin, the following message comes on screen:

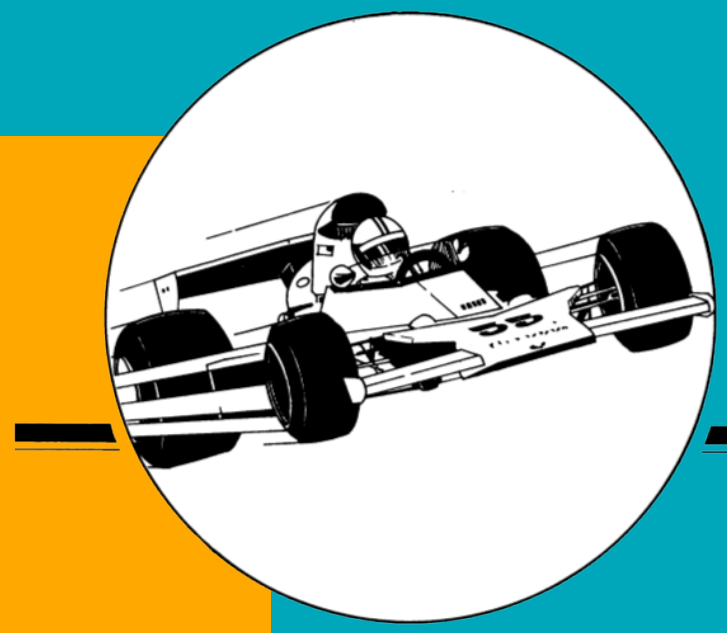
CHANGE LANES TO AVOID
CRASH WITH OTHER CARS

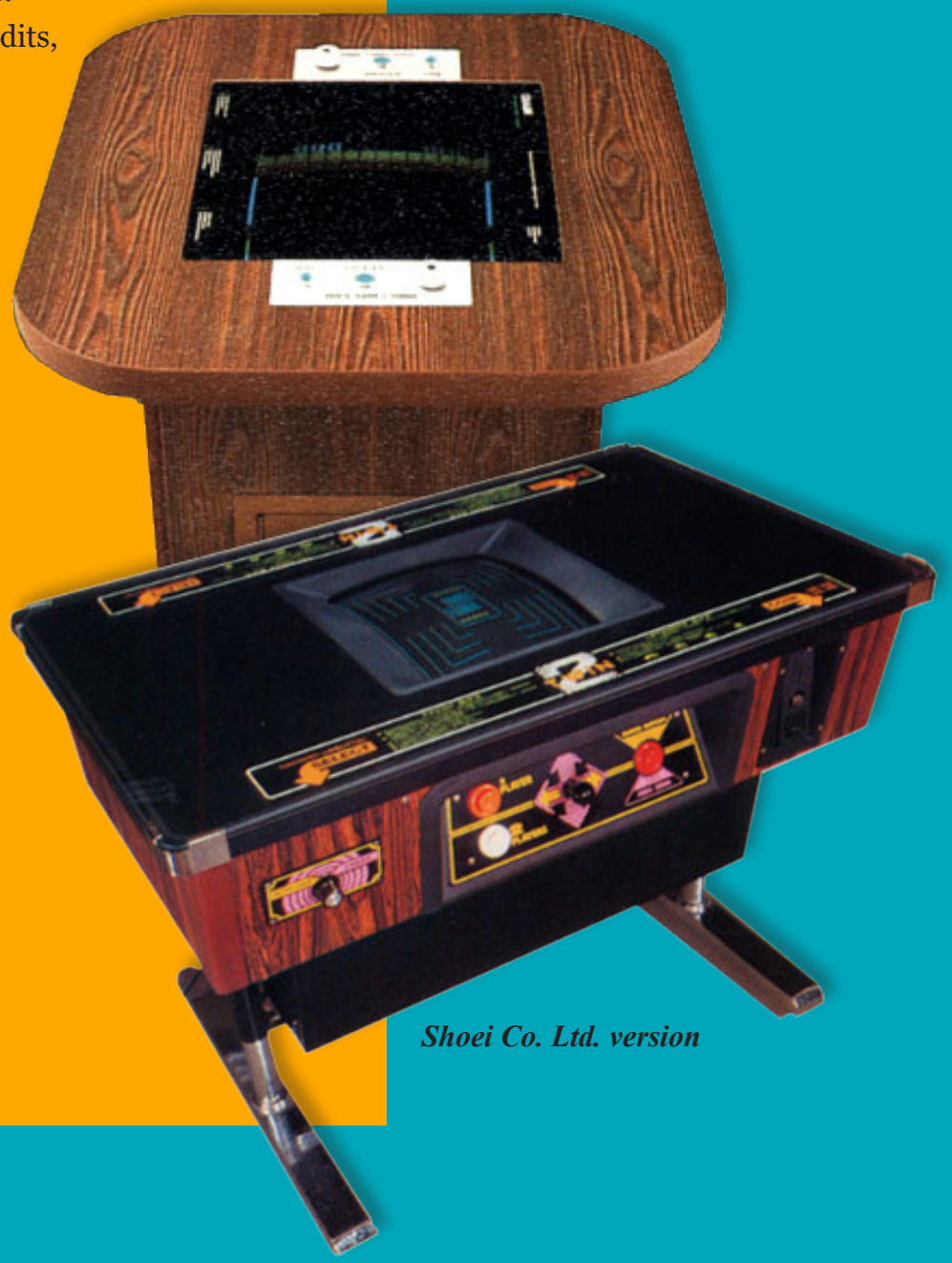
10 POINTS FOR EACH DOT BONUS POINTS IF ALL DOTS ARE EILIMINATED

CREDITS N
TOP THIS SCORE FOR CREDIT
M

Here, N is the number of games in the credit counter, and M is a random score feature. At the operator’s option, CRASH awards one extra game to any player who matches or exceeds the score M.

Game Play
When a player presses one of the two START buttons (after coinage), a fanfare turns signals the start of play. The player’s car starts at the bottom of the screen





Shoei Co. Ltd. version

(in the outer lane) and moves counter-clockwize. One drone car starts at the same place, moving in the opposite direction.

The drone car tries to crash into the player's car. The player must avoid crashes by changing lanes at interchanges; he uses the FAST button to reach an interchange before the drone car.

When the player's car drives over a speed dot, the SPEED BEEP sounds and the dot disappears. At game start, each dot scores 10 points; if the player clears all the dots in a single turn (without crashing into the drone car) the playfield is reset, and all speed dots score 20 points. Each successive time the player clears all dots, the dot score goes up: 20 points, 30 points, etc.

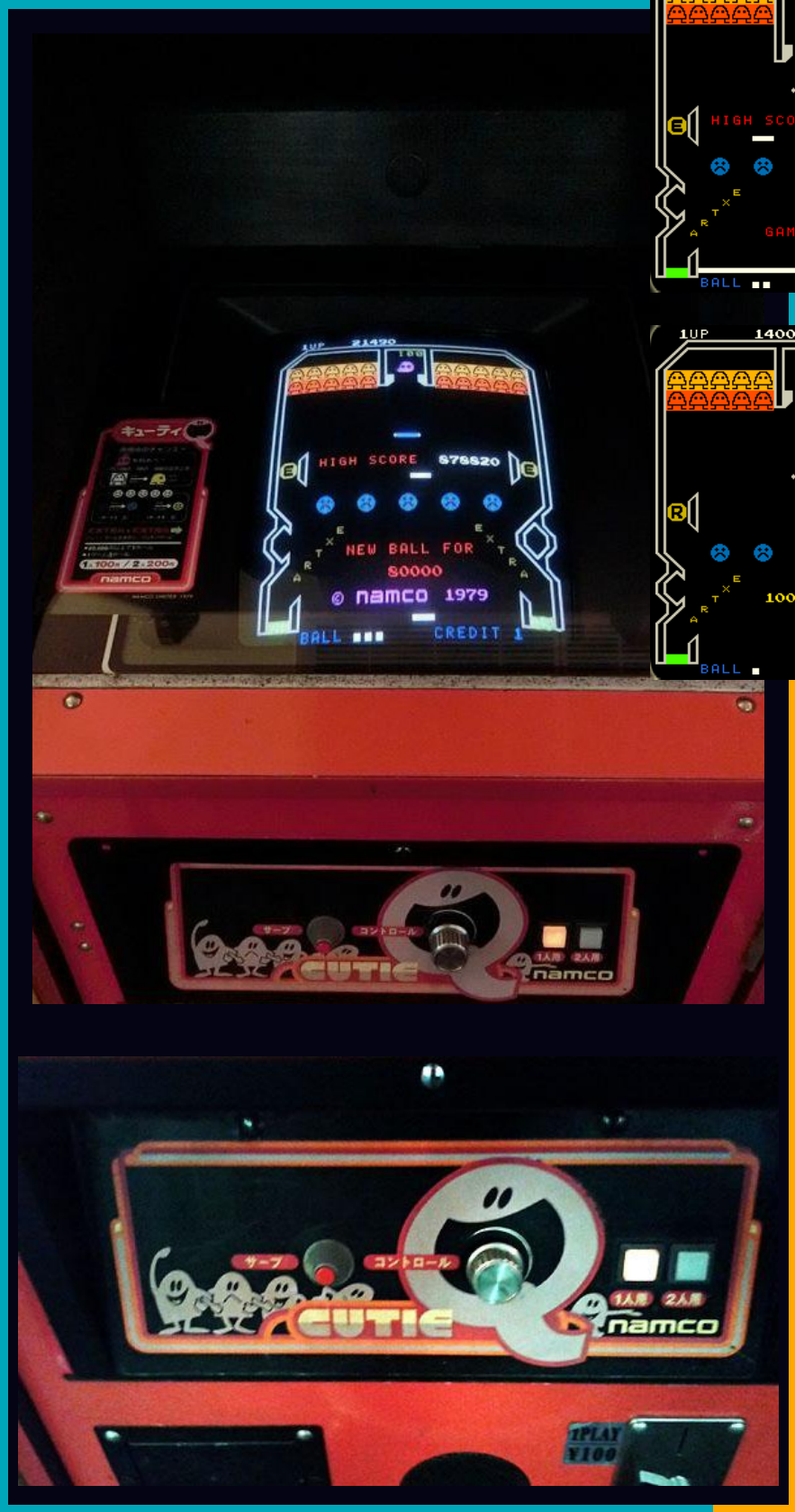
The number of drone cars increases with the point value of the speed dots. At game start (10 points per dot) only one drone opposes the player; at the next level (20 points per dot) two drones oppose him. At all succeeding levels (30 points and above), three drones.

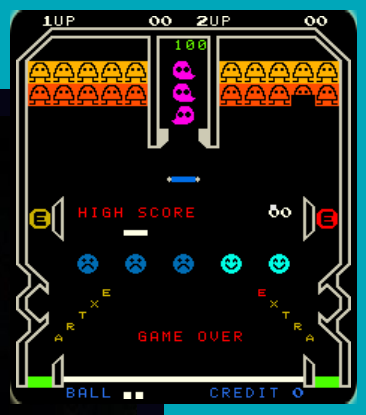
A turn continues until the player crashes into the drone car. The message display in the center of the screen shows turns remaining, by displaying one car for each crash (turn) left, not counting the current turn.

SELECTABLE OPTIONS

CRASH has three switch selectable options. These are controlled by a seven segment DIO switch located on the main logic board at position 14A. This switch is accessible from the front of the game through the coin door.

Options include; Coinage, Crashes (Turns), Top this score, and Audio Adjustments.





Cutie Q

Manufacturer *Namco*
Release *1979*
Class *Wide Release*
Genre *Pinball*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Cutie Q is an arcade game released by Namco in 1979. It is the third in a loose trilogy of pinball-esque games developed by Toru Iwatani prior to his development of Pac-Man.

More baroque in design than his prior two video pinball tables, Cutie Q places less emphasis on simple Breakout-esque mechanics and provides more methods of achieving high scores for players. While virtual drop target equivalents are still present, there are several new elements at play.

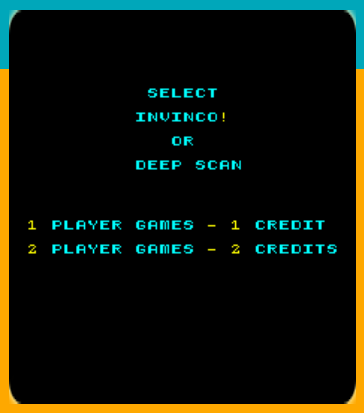
- The letters E-X-T-R-A appear on either side of the table in lanes, and passing the ball over each of them creates a score multiplayer.
- Two alleys of drop targets at the top of the board can be cleared out to reveal a bonus target, a yellow gumdrop-shaped creature, which can be taken down for points that are tied to a rapidly cycling multiplier (1-9x 500 points).
- A narrow central alley exists at the top of the board, which fills in with ghost-shaped targets each time the player serves the ball from the lower paddle of this two-paddle game. Each time any amount of these ghosts is destroyed with a shot, their individual point value increments by 100 points. This creates incentive to risk allowing the ball to travel low on the board in exchange for the reward of cueing up as many as four ghosts in the alley. However, if four ghosts are already present and the ball connects with the lower paddle, three ghosts despawn and they must be repopulated.
- Five smiling faces near the center of the board, illuminated by passing the ball over them, create yet another score multiplayer.

Cutie Q also displays an interest by Iwatani in broadening the appeal of video games. The table, while remaining a simple layout relative to what could be accomplished by even contemporary pinball machines, introduces several elements that would be further refined in 1980 into the seminal Pac-Man.

"giantbomb.com"

Deep Scan

Manufacturer *Sega/Gremlin*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *2 [Drop Charge Left| Drop Charge Right]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*



Deep Scan is a fixed shooter arcade game, that was released by Sega on their Vic Dual hardware in 1979 and licensed to Gremlin Industries for US manufacture and distribution.

The gameplay is similar to that from Gremlin's own Depthcharge - but it is in colour instead of monochrome, features a radar that shows the positions of the enemy submarines before they appear on the screen and has a "rank" in the bottom-right corner of the screen (to show a player how his score measures against those of the 99 previous players). It also features red ("bonus") submarines, and if players manage to drop a bomb on them, they will receive bonus points for doing so; also, if a mine launched by an enemy submarine hits their boat, it will sink it instead of reducing the amount of points they will receive for all the subsequent submarines by half, given that this game is life-based (instead of time-based). When players reach a specific point value, the mines will also begin moving faster - and the more enemy submarines they miss, the more mines will be aimed at their boat. The game ends if players lose their last life (instead of when they run out of time).

This game was manufactured in four cabinet styles: upright arcade, cocktail, stand around and mini. Besides being a standalone game, Deep Scan was also released with Head On 2 or Invinco! in dual game cabinets. The marquee was divided in half with one name on the left and the other on the right. There were also two sets of controls; one for each game.

"strategywiki.org"

The game was ported to the Atari 2600 in 1983 under the title of Sub Scan (known as Subterfuge during development), and was included as a minigame in the Sega Saturn port of Die Hard Arcade. This version retains the original graphics but includes updated sound, and every 200 points earned will give the player an extra credit for use in the main game.

"segaretro.org"

excerpt from the flyer:

Dive! Dive! Dive into the new video excitement with Gremlin's DEEP SCAN. This totally new game pits your players' battleship against a pack of marauding submarines. While you pack in the profits!

ALL DEEP SCAN action is in bright, exciting color. There's also an all new array of authentic sounds. Like the realistic "beep" of sonar. A warning claxon when the red bonus sub appears. Explosions of depth charges and mines. Even the sound of splashing water when charges and mines break the surface.

Another new feature of DEEP SCAN is the View Port. It shows your players the enemy subs *before* they appear on the game screen, so players can plan shots accordingly. There's also a new ranking feature, showing each player how they measure-up against the machine's previous 99 players.

And built with Gremlin's MultiPhase™ concept, DEEP SCAN keeps challenging your players as they improve their skills. So DEEP SCAN is sure to score a direct hit for your replay profit.

The game begins with a pre-selected number of ships. You must watch the View Port to know when to fire depth charges.

Plan your best shots, but be prepared for packs of subs as they appear on the screen. Try to hit as many subs as possible to increase your score and gain bonus points.

When the special red sub appears, a hit with depth charges wins you bonus points!

But it's not as easy as it looks. Because Gremlin's MultiPhase™ keeps DEEP SCAN a constant challenge. When you reach a high point level. the mines come faster. At an even higher score, the surface subs become more likely to release mines. And the more subs you miss, the more mines will be aimed at your ship.

The game ends when all your ships are sunk. But with DEEP SCAN, the fun never ends!

Defend The Terra Attack On The Red UFO

Manufacturer *"Unknown"*
Release *1979/1981*
Class *Bootleg*
Genre *Space*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Red UFO was released in March 1981. Developed and sold by Uko. The game was Uko's last game. Uko went into bankruptcy in March 1979.

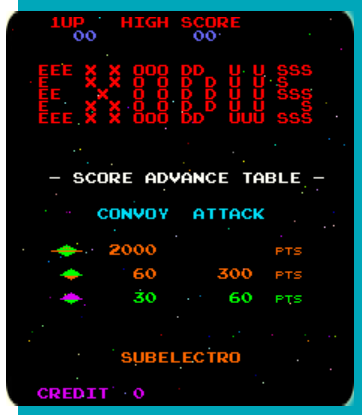
The game is very much in the vein of Galaxian. It has the same basic gameplay. Players must destroy all the small flying saucers then destroy the mothership.

A bootleg of this game is Exodus, which has slightly improved graphics.

Exodus

Manufacturer *Subelectro*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

As a bootleg of Defend The Terra Attack On The Red UFO, it plays very much like Galaxian.



Destination Earth

Manufacturer *"Unknown"*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *2 [Thrust/Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

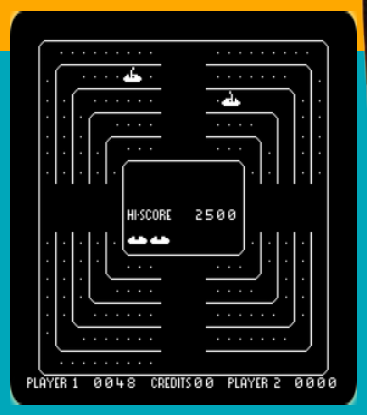
The game is a bootleg of Lunar Rescue. The graphics are essentially monochrome with a separate circuit that gives color to rectangular sections of the display.

Dodgem

Manufacturer *Zaccaria*
Release *1979*
Genre *Racing*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

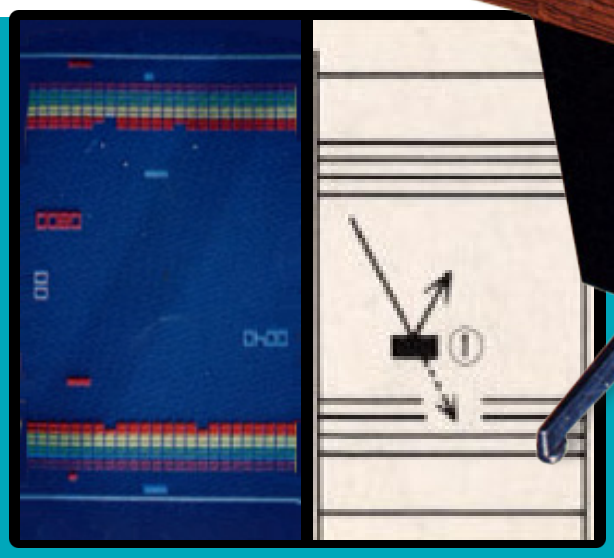
Dodgem is a 2-D maze racing game. Players control their boat through the maze to pick up the dots while at the same time avoiding the boat, or boats, that are constantly trying to ram them.

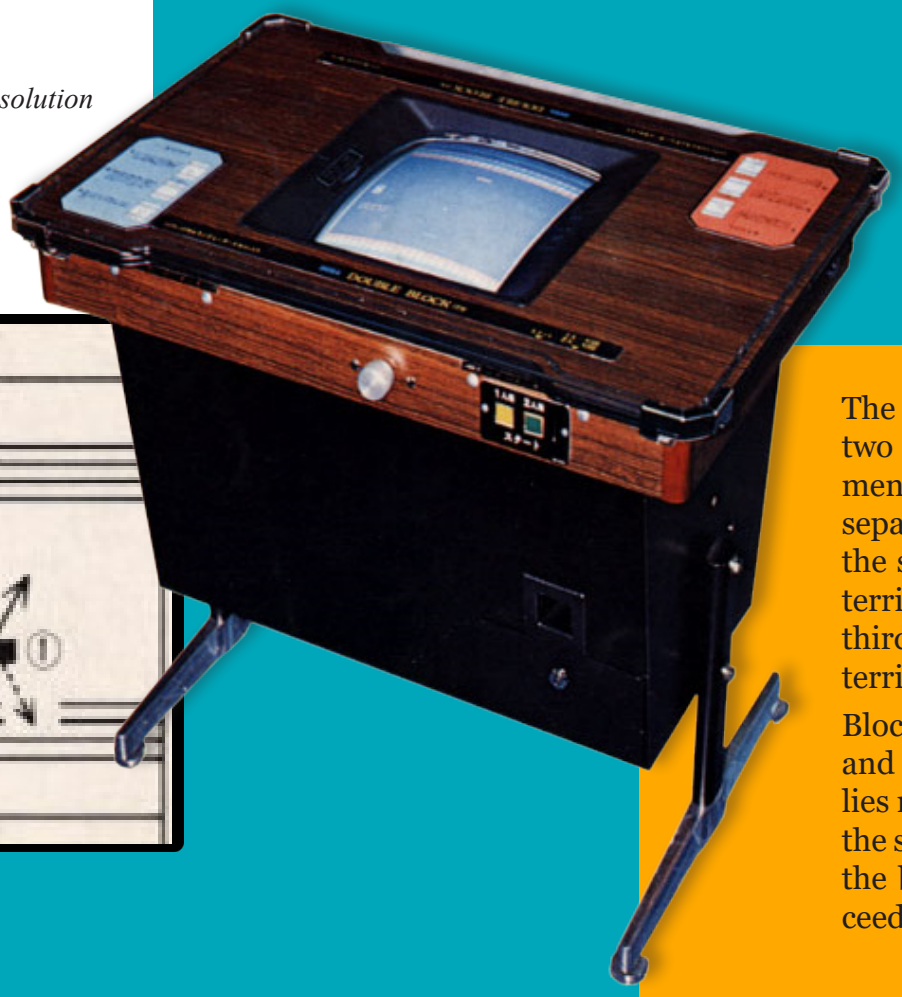
The player's boat can travel at two speeds, a normal speed which is the same speed as computer-controlled cars, or if the player presses the controller button, his or her car travels at a fast speed—double its normal speed. The computer-controlled cars have only one speed. Players change lanes by pushing the controller in the appropriate direction when their car is near one of the gaps in the roadway.



Double Block T3

Manufacturer *Sega*
Release *1979*
Class *Wide Release*
Genre *Ball and Paddle*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*





The game sits in a cocktail cabinet to accommodate two players. The premise of the game combines elements of Pong and Breakout. Players control three separate paddles: the first used to hit the ball a la Pong, the second used to prevent the ball in the opponent's territory from escaping through the back line, and the third used to return the ball entering the player's own territory.

Block points are 20 for red, 40 for yellow, 60 for green and 80 for purple. Scoring varies by the number of rallies made by players, which are displayed at the side of the screen. Game over occurs if the ball passes through the back line, which opens when a player's score exceeds 1000 points.

"segaretro.org"

Field Goal

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Sports*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Analog*
Buttons: *1 [Serve]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Field Goal is a clone of the game Breakout, where the player must use the rotary knob to control a paddle and hit the ball into the red, yellow and blue helmets on the screen. Each time a row of helmets is cleared out, a new row will appear in its place. If the player hits the orange area towards the top of the screen, it will decrease the size of the player's paddle. Sometimes a football player will appear, and if the ball hits him, the player will earn bonus points.

The game was ported to the PlayStation 2 in 2007 as part of Taito Memories II Gekan.

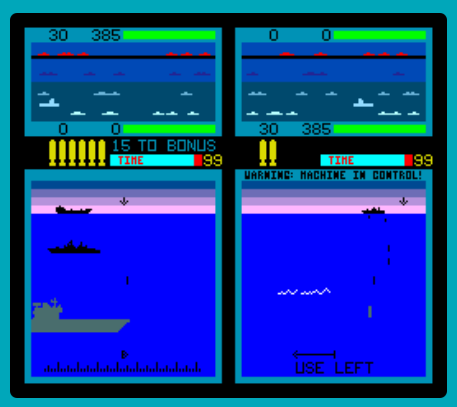
excerpt from the manual:

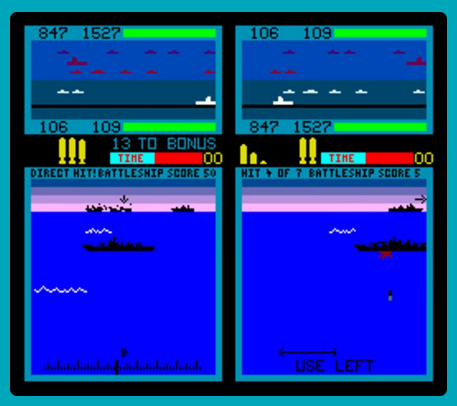
- 1 or 2 player game.
- 1 coin; 1 game (1 player)... 3 balls (adjustable to 5 balls)
- 2 coins; 2 games (1 player) or 1 game (2 players)
- After inserting Coin(s), press either one two player button to start game.
- After finish game-start music, helmets (blue, yellow, and red ones), the paddle and the ball will appear on the screen.
- Turn the control knob to move the paddle right or left and strike the ball.
- Two players alternative play.
- Scoring:

A goal	300 pts.
A blue helmet	40 pts.
A yellow helmet	30 pts.
A red helmet	20 pts.

Fire One!

Manufacturer *Exidy*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Steering: *X Yoke with two buttons [Dive/Surface|Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Upright*





Fire One! is a player-versus-player or player-versus-computer submarine showdown, designed and programmed by David Rolfe, Ted Michon, and Susan Ogg for Exidy in 1979. The cabinet is split into two halves, with each player controlling their first-person submarine perspective on their half of the screen.

The primary objective of the game is to find and destroy the enemy's submarine, while avoiding the enemy's torpedoes. Through the virtual periscope players are free to launch one of their 8 torpedoes to take out any of the enemy's various ships for extra points. It takes some time to reload each torpedo tube, so players must be judicious in how they plan their attacks.

In addition to being able to control the left/right rotation of the periscope, the game also features a submerge button which players can use to temporarily hide from the enemy. Holding this button down keeps them hidden but also keeps them out of the action, allowing the enemy free reign over the seas.

The game uses a Z-80 CPU. A DIP switch allows the operator to set time per quarter, bonuses, and sound during attract mode.

"mamedev.org"

MAN YOUR BATTLE STATIONS!

Exidy presents FIRE ONE, a one- or two-player submarine simulation game. The most sophisticated game ever! The better you play, the better FIRE ONE becomes. No need to preselect your skill level; FIRE ONE's computer matches your skill level and gives a real challenge to even the best players.

The TV screen is divided electronically. A cabinet partition prevents your opponent from seeing your side of the TV (promotes greater competitiveness among players), yet onlookers may see both fields of action. Each player has a sonar view at the top of the screen and a periscope view at the bottom of the screen (when not submerged).

Don't let Exidy's "Fire One" slip into the depths and away from your increased profit picture for 1979-80. Grab your periscope and check it out today.

Fortress

Manufacturer	*Sega/Gremlin*
Release	*1979*
Class	*Wide Release*
Genre	*Shooter*
Mode	*2 Players*
Gameplay	*Alternating*
Panel Layout	*Single Player*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Black and White*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

In Fortress, the player must defend a castle from cannonballs by intercepting them with their own cannons before they hit it with gameplay similar to Missile Command. If the player's castle is hit eight times, then it will be destroyed and the game is over.

"mobygames.com"

excerpt from the flyer:

Introducing Gremlin's New Video Game:
Fortress... A Solid Defense for YOUR Locations!

THE GAME setting is a raging battle between the enemy ship and the fortress standing nearby. You defend the fortress from the assault by enemy cannonballs! Intercept and destroy the enemy by firing your cannons before the enemy hits the fortress. If an enemy cannonball gets by, it will blow away part of the fortress! The game ends when the fortress is completely destroyed.

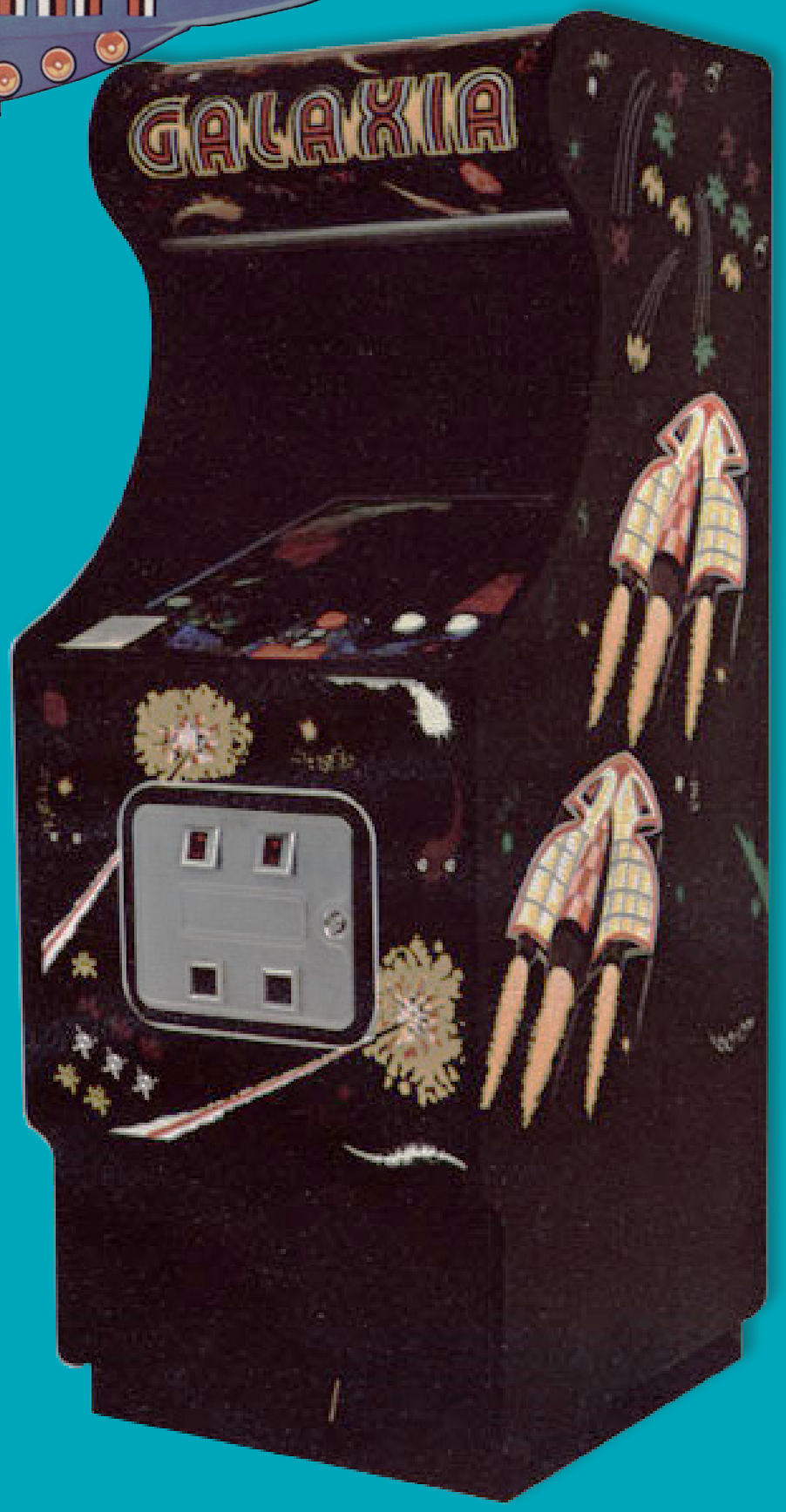
FORTRESS is a new single-player video from Gremlin,
and players will take it by storm!

PACKED WITH CHALLENGE;
SOUNDS: GREAT!

FORTRESS is a challenge on all skill levels. At first, only one enemy cannonball flies toward the fortress. Then as you gain skill in knocking out the enemy, more cannonballs fire upon the fortress! You really have to aim accurately, and FAST! It all adds up to plenty of fun! And, plenty of sounds! From the realistic sound of the flying cannonballs to the explosion when they hit the fort: All make FORTRESS even more fun!

Galaxia

Manufacturer *Zaccaria*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Galaxia is an Space shooter GalagaGalaxians Clone.

excerpt from the manual:

Starship “Galaxia” travels the galaxy in search of alien beings

Upon encounter the alien force sends squadrons to attack “Galaxia”

Players uses controls to guide “Galaxia” in an endeavour to eliminate the alien force and attacking squadrons.

Galaxian

Manufacturer *Namco*
Release *1979*
Class *Wide Release*
Genre *Space*
Board pin *Galaxian Pinout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail
Mini

Galaxian was developed by Namco and released in October 1979. It was published by Namco in Japan and imported to North America by Midway that December.

Galaxian expanded on the formula pioneered by Space Invaders. As in the earlier game, Galaxian features a horde of attacking aliens that exchanged shots with the player. In contrast to Space Invaders, Galaxian added an element of drama by having the aliens periodically make kamikaze-like dives at the player's ship, the Galaxip. This made it the first game to feature enemies with individual personalities. The game's plot consists of a title screen that displayed the message "WE ARE THE GALAXIANS / MISSION: DESTROY ALIENS".

The gameplay is relatively simple. Swarm after swarm of alien armies attack the player's ship that moves left and right at the bottom of the wraparound screen. The Galaxip can only have one shot on screen at a time. The player defeats one swarm, only to have it replaced by another more aggressive and challenging swarm in the next stage. A plain and repetitive starfield scrolls in the background.

The game was designed to build and improve upon the formula of Taito's game Space Invaders, which revolutionized the gaming industry upon its release a year earlier. Galaxian incorporated new technology into its dedicated arcade system board, the Namco Galaxian board. Unlike Space Invaders, which was black and white and featured enemies that could only move vertically and horizontally as they descended, Galaxian had a color screen and enemies that descended in patterns and came from various directions. The result was more complex and difficult game play.

Soon after the Japanese release, Namco partnered with the American company Midway to release the game in North America. Midway had previously published Space Invaders in the market, but had to seek new foreign partners when Taito decided to market their games themselves.

Galaxian was very successful for Namco and introduced several "firsts". Although not the first color video game, Galaxian took RGB color graphics a step further with multi-colored animated sprites and explosions, different colored fonts for the score and high score, the scrolling starfield, and graphic icons that show the number of lives left and how many stages the

MIDWAY'S

Galaxian

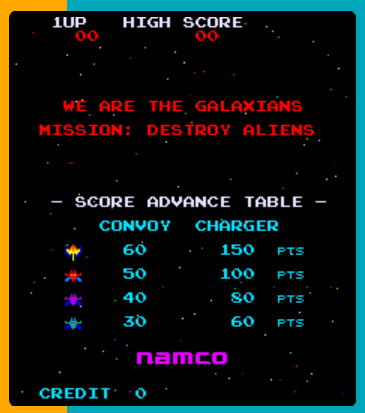
a Bally co.

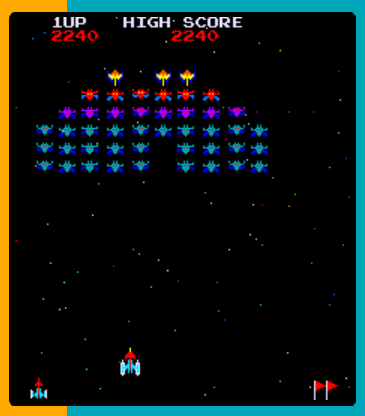
player had completed. It also features a crude theme song and more prominent background "music." These elements combine to create a look and feel that would set the standard for arcade games in the 1980s such as Pac-Man.

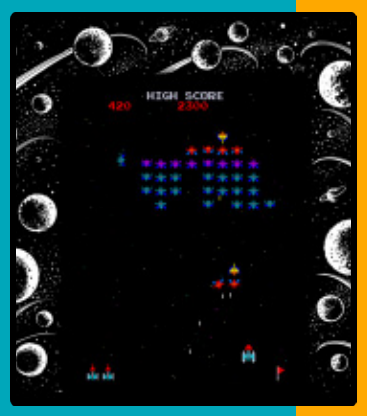
Galaxian has spawned several follow-up games. The most popular of these was its immediate successor, Galaga, which largely eclipsed its predecessor in popularity, introducing aliens attacking in intricate formations, multiple shots, and bonus stages. A third game in the series, Gaplus, was released in 1984. As with Galaga, this was a fixed shooter, with limited vertical movement (like Centipede). However, by 1984 the novelty of the Space Invaders formula had faded, and it was no longer successful. A fourth game, Galaga '88, was released in 1987, and imported to North America by Atari Games; and a fifth and final game, Galaga Arrangement, was released as part of the Namco Classic Collection Vol. 1, in 1995.

The Galaxian flagship (also known as the "Galboss") has made numerous cameo appearances in other Namco games (like Namco's signature character Pac-Man and the Special Flag from Rally-X, which also went on to become recurring items in other Namco games).

Galaxian is the oldest game retconned by Namco to be included in the "United Government Space Force" (UGSF) continuity, a meta-fictional organization Namco has employed to suggest that a selection of their games throughout the years have occurred







within the same universe and on the same timeline. As of January 2018, Galaxian is the purported seventh entry in this timeline and takes place between the events of Galaxian³ and Galaga.

Galaxian was one of the most widely pirated motherboards during the early '80s. Numerous hacks were made of the game and featured slightly redesigned enemy characters and special bonus stages. The scrolling starfield and death explosion were still familiar as those from Galaxian, however. These hacks include: Galaxian Part 4, Galaxian Part X, Galaxian Turbo, and Super Galaxians.

The Galaxian world record has been the focus of many competitive gamers since its release. The most famous Galaxian rivalry has been between British player Gary Whelan and American Perry Rodgers, who faced off at Apollo Amusements in Pompano Beach, Florida, USA, on April 6–9, 2006. Whelan held the world record with 1,114,550 points, until beaten by newcomer Aart van Vliet, of the Netherlands, who scored 1,653,270 points on May 27, 2009 at the Funspot Family Fun Center in Weirs Beach, New Hampshire, USA.

The original cabinet is white with a painted picture of the player ship about to shoot a green dragonfly alien from the fleet. The painting is three color: Blue, Green same as the T-molding and Black, and uses the entire side area similar to original Pac-Man.

Midway version

excerpt from the Namco flyer:

The ultimate space war video game, featuring a convoy of aliens determined to annihilate the player's Galaxip. The player must destroy the aliens and also out-maneuver enemy fighters that peel-off from the main squadron at random.

Specifications:

Upright

1,740 mm (5.7 ft) H x 630 mm (2.1 ft) W x 800 mm (2.6 ft) D
Weight: 92 kg (203 lbs)
Monitor: 20" Color

Cocktail Table

600 mm (2.0 ft) + 100 mm adjustable H x 860 mm (2.8 ft) L x 560 mm (1.8 ft) W
Weight: 54 kg (119 lbs)
Monitor: 14" Color

Namco Upright and Cocktail versions

BONUS POINTS:

Double Points:
For lone green alien attacking at random.

150 Points:
For hitting lone attacking ship.

200 Points:
For hitting attacking flagship with single escort.

300 Points:
For hitting attacking flagship with two escorts.

Special 800 Points:
For destroying fighter escort and flagship. (Escort ships must be hit first.)

Dimensions

33’ Deep
67’ High
25’ Wide

excerpt from the Midway Cocktail flyer:

Galaxian, Midway’s new space wars video game, features a full color monitor and is available in a 1 or 2 player upright or cocktail table model.

The player, controlling the Galaxian defenders of the Earth, must destroy a convoy of aliens that are equally determined to annihilate him by firing missiles. The defenders must protect himself without the aid of barricades. He must protect himself without the aid of barricades. He must shoot down not only alien army regulars, but also out-maneuver and destroy enemy fighter escort ships that peel off from the main body of the alien squadron at random.

Midway Cocktail

German version

Dimensions

Height: 29” (73.63 cm)
Depth: 32” (81.25 cm)
Width: 22” (55.86 cm)

Apparatebau GmbH version

Galaxian Part 4

Manufacturer *G.G.I.*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

This game is the same as Galaxian except the graphics have been altered and the game has been made more difficult.

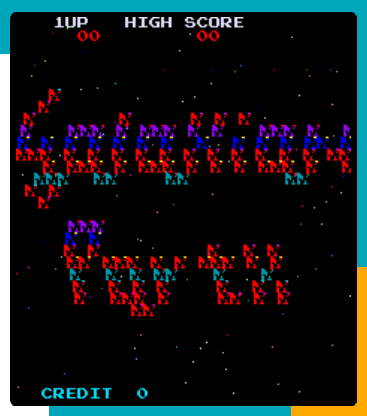
Galaxian Turbo

Manufacturer *"Unknown"*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

This game is like Galaxian only much faster and the aliens move in a different pattern.

Galaxian Part X

Manufacturer *Nichibutsu*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*



This game is just like Galaxian but the rate of fire is much faster and the alien's movements are more random.

GT Roadster

Manufacturer *Ramtek*
Release *1979*
Class *Wide Release*
Genre *Racing*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Steering: *Wheel*
Shifter: *4-position (1/2/3/4)*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

GT Roadster, released in December, 1979, is a projection screen driving game in the mold of Kasco's The Driver that used Super 8mm film cartridges.

excerpt from the flyer:

Take the ride of your life -
with the newest racing game from Ramtek

GT Roadster gives you the feeling of realism you've never experienced in a game before. So realistic, you'll think we should have included a seat belt. Because the road you see is the real thing - film, not TV animation. Add the feel of the wheel and the realistic sounds of acceleration, braking, and crashing, and you've got a totally new experience in arcade games.

And there's more. With interchangeable film cartridges from Ramtek, you can change to another game in a matter of minutes, just by switching ROM's, cartridges, and graphics.

- Built-in self-test mode
- High score of day
- High-quality mylar film
- Coin options: 1, 2, or 3 coins per play, or free play
- Operator adjustable free-play mode
- Adjustable time control and extended play
- Measured speed and distance

Space Invaders Galactica

Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

The game is a hack of Galaxian. The only difference seems to be a name change.

Galaxy Wars

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Hardware *Taito Classic*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Launch/Thrust]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

GALAXY WARS

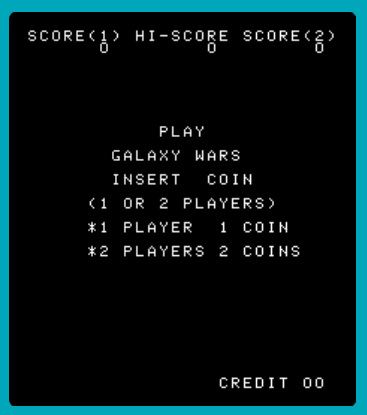
Galaxy Wars is a vertically-oriented Arcade game first released in 1979 by Universal Co. for the Japanese market. It is loosely inspired by Taito's Space Invaders - Taito would produce the cabinets for Galaxy Wars.

The goal of the game is to guide a missile directly upwards where the alien invaders are scrolling horizontally. The player must avoid the floating asteroids between them and the alien ships, as well as evade the alien's laser projectiles. If the missile collides with an alien ship, both are destroyed and the remaining aliens all move slightly faster. If the player's missile is destroyed before reaching the aliens, they lose a life.

Points are awarded for blowing up various ships and range from 50-550 depending on the ship. There is a bonus chance of 600 points for one pattern. After clearing a level or "pattern" as the back of the flyer calls it, the player was rewarded with messages like "Good!!" after 3 screens cleared, "Very Good!!" after 7 screens cleared, "Wonderful!!" after 10 screens cleared, and "Fantastic!!" after 15 screens cleared. Players who failed to score any points were told to "Give Up!!" A launcher appears every 3,000 additional points (5,000 if the adjustment is made in the controlling dip switches in the arcade cabinet).

The game has a 1up and 2up player score and High Score tallied at the top of the screen.

The arcade cabinet has one joystick to move the launcher left to right and guide the missiles.



Get A Way

Manufacturer *Universal*
Release *1979*
Genre *Driving game*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Deluxe*

excerpt from the flyer:

KEEP YOUR EYE ON THE GAME

Set your vehicles in low gear and rev up the engine. Then, whoosh, you're off. Keep a firm hand on the steering wheel and roar around the circuit. (You'll find you get better acceleration when you start in low. And you get more points, too!)

You're on a slip zone. You can't turn the steering wheel. The car slips and veers to the side. To get out of this zone, you have to be able to handle the steering wheel expertly and master the technique of axle operation.

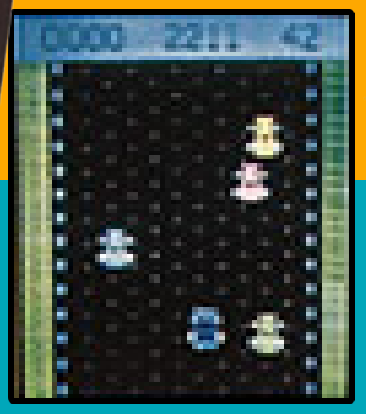
If this were our only feature, you'd soon get tired of it. That's why GET-AWAY features strong, resilient car bodies that can survive collisions and keep racing around the track.

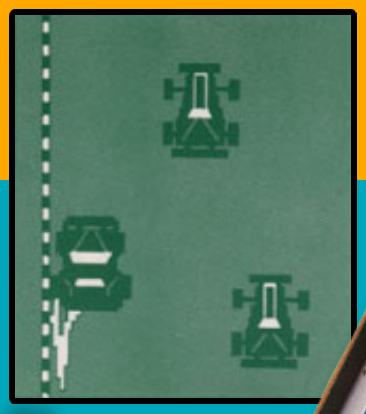
The rear bumper of the player's car is super-tough. If other cars bump you from behind, they suffer the damage - not you! Also, the sides of the car are sturdily built so that other cars can be shoved aside and keep you on the track.

The car will not break up from the front as long as the front bumper avoids a head-on collision. If you mishandle the steering wheel or hit another car at an oblique angle, you'll lose half your front bumper - but you can still keep going.

However, if you get hit in the same spot a second time, that's the end. You go into a spin and burn up. If your car crashes into the green stones at the side of the road, it catches fire and explodes. Also, depending on how you bump into the other cars, your car may flip off the course and burn up.

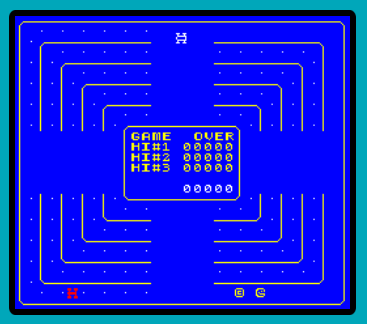
As your points pile up, the number of rival cars increases. To control the axle, steering wheel and gears at the same time, you need to have superior skills to win. This game is so exciting that you won't be able to stop.

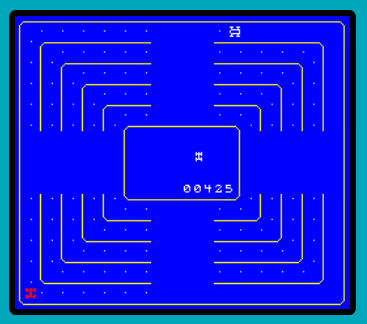


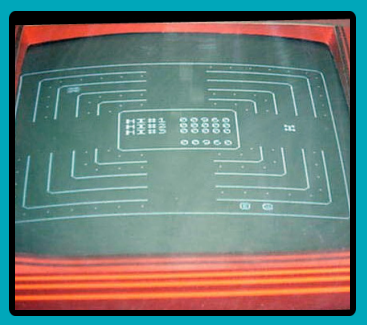


Head On

Manufacturer *Sega/Gremlin*
Release *1979*
Class *Wide Release*
Genre *Maze*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up, down, left, right)*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail
Mini







Head On is an arcade game which was released by Gremlin Industries in 1979 (Irem also released a version on their M10 hardware in that same year); the player must use a single button to accelerate a car around a maze which contains 136 pellets, and a four-directional joystick to make it change lanes while trying to avoid crashing into various other (CPU-controlled) cars that are moving in the opposite direction. It's the first maze game where the goal is to run over dots, and Head On is considered a precursor to Namco's 1980 hit Pac-Man. But if players do get forced to crash into one of the CPU-controlled cars they will have to start the maze over from the beginning - and this can get frustrating when there are three CPU-controlled cars on screen.

Sega later released this title in a dual-game cabinet with Data East's Alpha Fighter. Konami's Fast Lane arcade game, released in 1987, is Head On with improved graphics and some additional features.

Head On was ported to the Commodore 64 in 1982, as well as the VIC-20, and Nintendo Game Boy. Head On later appeared in the Sega Saturn collection Sega Memorial Selection Vol.1 and in the PlayStation 2 collection Sega Ages Vol. 23.

A spiritual successor, Pacar, was released for the Sega SG-1000. The version features updated graphics, a faux 3D environment, multiple enemy cars that chase the player in varying ways, tunnels that exit the maze, and Power Pellets that are produced by the player to eliminate enemy cars. These additions make it more like a Pac-Man clone.

A mobile phone version of Head On titled Sonic's Head On was released exclusively in Japan in 2000.

"strategywiki.org"

excerpt from the flyer:

Presenting HEAD ON©, the incredible new computer road game.
All you have to do is clear the lane markers in all 20 lanes. Each marker progresses in value as winning heats are finished.
Hit the accelerator button for a burst of speed.
Shift the joy stick for quicker lane changes.
But watch out!
There's an oncoming car hurtling along in the opposite direction... you must plan your course to avoid the explosive HEAD ON collision.
But if he does get in your lane - CRASH!!!
Four collisions and you're out.
There's even a built-in bonus, but you won't see it until you play the game.
As an operator, you'll be **in** the money as your customers try and try again to beat the weekly top scores.
And HEAD ON is only the first of our all-new MultiPhase video concept games. So as a player gets better at HEAD ON, HEAD ON gets tougher and tougher to beat.
Which means a MultiPhase game keeps' em coming back for more.
Let Gremlin/Sega HEAD ON put you in the fast lane to outstanding profits.

FEATURES:
- Number of player cars easily adjustable
- Games available in color or black and white
- Pre-tested, reliable circuitry
- Attention-getting sounds
- Long-life controls
- Attractive, durable cabinets
- Anti-static circuit for NO free games
- Complete service manual
- **E-Z ADJUST™** controls for volume and sound off during advertising
- Cabinet size: 26" W x 67" H x 28" D

Black/White game: 290 lbs.
Color: 330 lbs.

Head On 2

Manufacturer *Sega/Gremlin*
Release *1979*
Class *Wide Release*
Genre *Maze*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up, down, left, right)*
Buttons: *1 [Accelerate]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail
Mini

Head On 2 was released by Sega in 1979, and licensed to Gremlin Industries for US manufacture and distribution; as its name suggests, it is the sequel to Gremlin's own Head On, which was released earlier in the year. The player must again use a single button to accelerate a car around a maze (which contains 124 pellets), and a four-directional joystick to make it change lanes while trying to avoid crashing into various other cars that are moving in the opposite direction. The main feature that sets this game apart from its predecessor is the two areas on either side of the maze, in which you could make a complete revolution in order to reverse the direction and travel in the same direction as the CPU-controlled cars; however, because the players car will still die, if it gets forced to crash into one of the CPU-controlled cars from behind, there is now a chance of a head-on collision and a rear-end collision, and players still have to start the maze over from the beginning, if either of those things happen. There can now also be up to four CPU-controlled cars on the screen, which may make it even more frustrating.

"strategywiki.org"

Heiankyou Alien

Manufacturer *Denki Onyko*
Release *1979/1980*
Class *Wide Release*
Genre *Maze*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *4-way (up, down, left, right)*
Buttons: *2 [DigBury]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

Heiankyo Alien is a video game created by the University of Tokyo's Theoretical Science Group (TSG) in 1979. The game was originally developed and released as a personal computer game in 1979, and was then published by Denki Onkyō Corporation as an arcade game in May 1980. Heiankyo Alien was the first game in a long lineage of trap-'em-up games.

The player controls a Heian period police officer who must defend the capital city from an alien invasion by digging holes in the ground and filling them back up after an alien falls inside. The player scores points for every alien trapped, and the quicker the hole is filled up after the alien falls in, the higher the number of points are scored. The aliens increase in number as the levels progress, and they can escape from holes after a certain period of time elapses or if another alien passes above their hole. The player loses if he comes in contact with an alien. There is a time limit for each level, and the number of aliens increases drastically when this limit is reached, essentially preventing the player from completing the level.

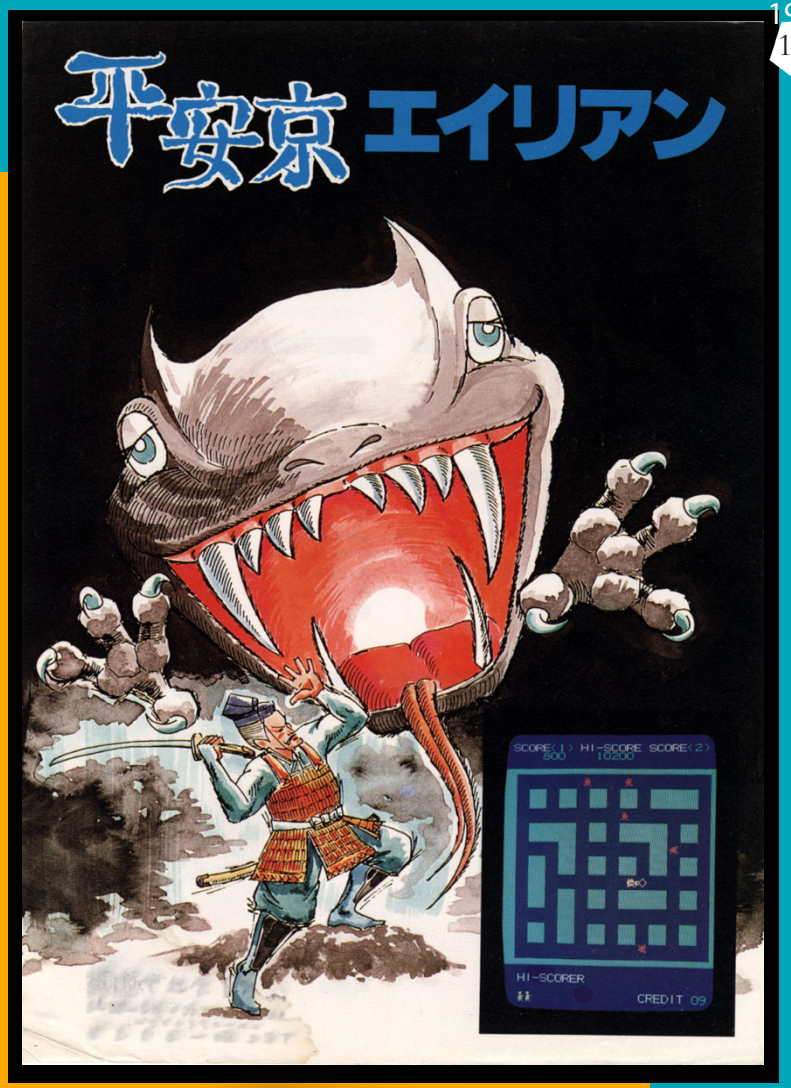
The player can enter his name on the arcade machine if a high score is reached. In the original version of the game, a unique cursor is employed where the player selects a letter by having his character walk through the street that displays the desired letter. The game also contains a two-player mode, where the players can either alternate turns or play on the same screen simultaneously.

The arcade version uses a Zilog Z80 microprocessor, and the arcade system board used is a copied version of the one used by Sega's Head On. Since the original system board itself was a copy, Heian-kyō Alien's system board was easily duplicated, and many of the units distributed to arcade centers were "copies of a copy" created by other companies. Few of the original units manufactured by Denki Onkyō remain in place today.

Many copied arcade versions of the game exist with differences in background color and sound effects. Taito Corporation produced a version with a light-blue background that recycled many sound effects from Head On. The unit's cabinet and instruction card were created specifically for the version by Taito, but it is not known whether the version was a licensed manufacture or a copy.

Space Panic (1980) and its clones (e.g. Apple Panic) also feature trappable aliens while Lode Runner's (1983) enemies are human guards.

The manga, Game Center Arashi, featured a story involving Heiankyo Alien, making the game gain interest.



1979
184

Invader Wars

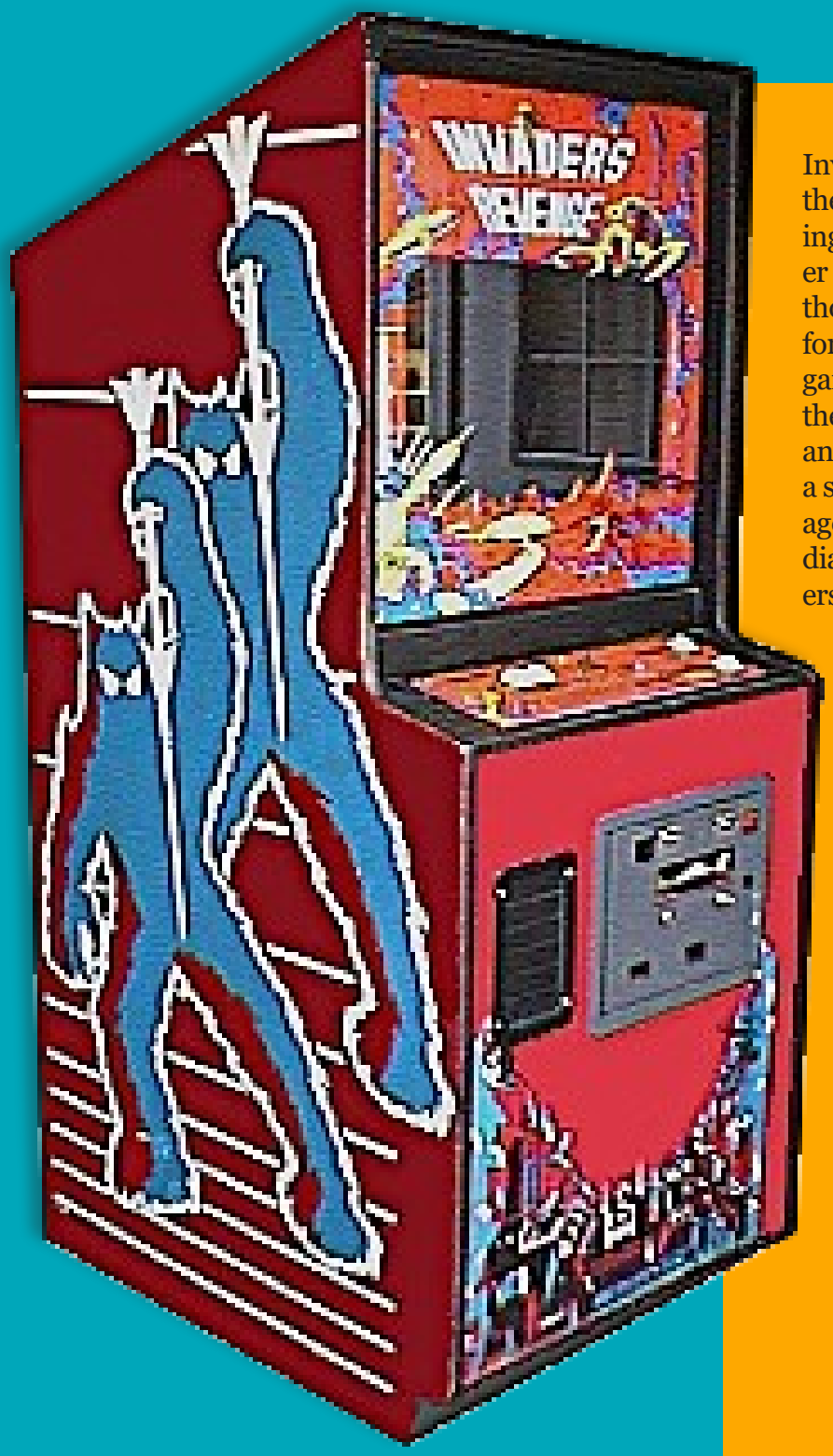
Manufacturer *World Vending*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

Invasion is a clone of Space Invaders. Atari and it's Italian arm Bertolino succesfully sued Sidam for copyright violation.

Invasion

Manufacturer *Sidam*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Invader's Revenge



Manufacturer *Zenitone Microtech*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Invader's Revenge put several new spins on the Space Invaders formula. Rather than facing a formation of 55 invaders, there are fewer than a dozen per any given screen. Even though the invaders look exactly like the forces players faced from the original arcade game, for the most part, they do not adhere to the regular Invaders rule of moving to the side and dropping down a notch when they reach a screen edge, as the invaders mostly move diagonally. They also not only fire vertically, but diagonally as well, at times catching the players ship in a crossfire (which is what increases the difficulty level with this game, as it is much higher than most Invaders games in general). Sometimes when an invader is shot, its body will quickly fall to the bottom of the screen and is deadly to a player's ship upon contact. The small invaders will also, after several rounds, shrink to half their width with every other move, making them harder to hit.

Players also have a fuel level to maintain, which occasionally an invader will drop down vertically to pick up a fuel cell at the bottom of the screen. If they make it back up to the top of the screen with the fuel cell, a notch of fuel will be deducted from the player's total. There are also big bombs (bigger than the ones the invaders fire) that drop from the top of the screen during levels, which will also deduct fuel if they make contact with the bottom of the screen/player's fuel supply.

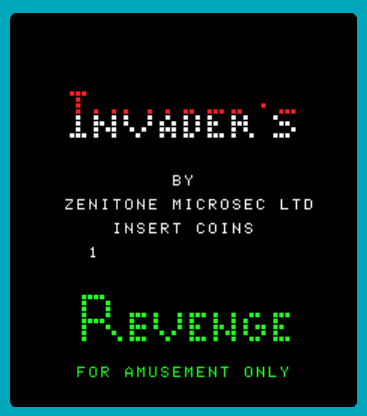
After several rounds, the player must dock with the ship normally seen at the top of the screen (which the ships switch areas then, with the player's ship appearing at the top while the refueling ship appears at the bottom) to be refueled. The player must first avoid several squares in the middle of the screen, then dock with the center of the refueling ship to refuel and earn a bonus, then the game will start over at the beginning wave once more.

And unlike most other official Space Invaders games or clones, there is no UFO that appears overhead, as the refueling ship cannot be shot.

Being hit by any invader, bomb, docking square, falling fuel cell, or not landing directly in the center of the refueling ship will destroy the player's ship. The game will end when there are no more remaining ships or the player runs out of fuel. An extra ship is awarded at 1500 points.

This is a Space Invaders conversion that was fairly common in the UK around 1980. It runs on Midway's hardware (EPROM swap), but it has a seperate daughter board on the top of the three board sandwich, to provide the unique Invader's Revenge music and sound effects.

"spaceinvaders.wikia.com"



Invinco!

Invinco is a 1979 Space Invaders clone made by Sega. Though it is essentially the same game as Taito's, the aliens don't just move left and right - one row blinks in and out of view, one row rolls about making it difficult to hit and another has aliens that turn into exploding bombs when hit, taking out everything around them.

The game was manufactured in four cabinet styles: upright arcade, cocktail, stand around and mini. Besides being a stand-alone game, Invinco! was also released with Deep Scan or Head On 2 in dual game cabinets. The marquee was divided in half with one name on the left and the other on the right. There were also two sets of controls; one for each game.

excerpt from the flyer:

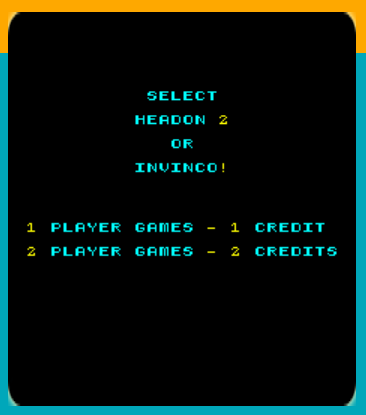
The battle is on! And Gremlin's new INVINCO puts you right in the middle with exciting new video fun.

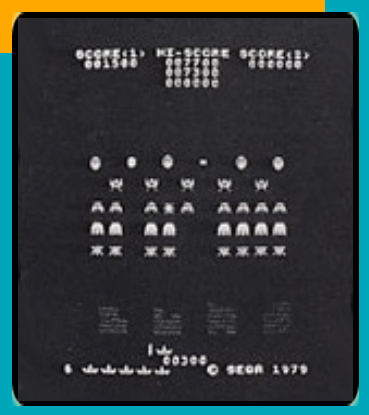
All the INVINCO action is in thrilling color. Realistic sounds heighten the excitement with every shot you take and every enemy warrior you hit. The action is fast-paced, so it's a real test of speed and coordination.

Manufacturer *Sega/Gremlin*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cabinet Mini*

Player Controls - These include Right and Left Control Buttons for moving your warrior. There's also a Fire Button for shooting at enemy troops. And the one and two player Start Buttons are prominently placed to encourage multi-player use.

Operator Controls - These feature Gremlin's exclusive E-Z ADJUST™ controls for volume and sound-off during advertising. You can also change the number of player weapons to vary play time simply by setting a switch on the logic board.





IPM Invader/ Capsule Invader

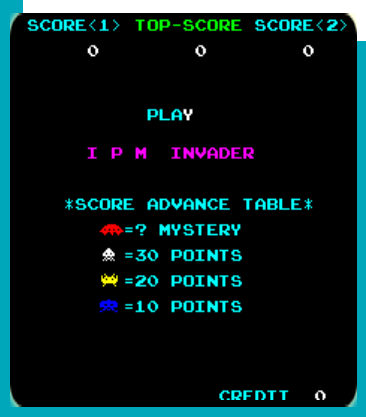
Manufacturer *Irem*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Rotary: *Rotational (left, right)*
Rotary: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

IPM Invader was developed by IPM (which would later become known as Irem) in 1979. It is a clone of the original Space Invaders. It uses a color monitor instead of a black and white monitor with a color overlay.

It has the addition of the famous 'coffee break', whereas after every 3rd wave or pattern of invaders, the 'coffee break' appears. Another unique feature in IPM Invader is the 'capsules'. When dip switch settings are changed to advanced settings, the game becomes more difficult with the introduction of the UFO (mystery score ship) dropping 'capsules' that hatch into new invaders. The 'capsules' cannot be destroyed until they hatch, and are dropped across the screen to defeat the players 'narrow column' strategy.

It is also possible that the game was released as Capsule Invader, also by Irem.

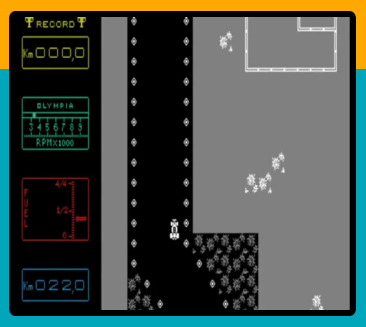
"spaceinvaders.wikia.com"



Long Beach

Manufacturer *Olympia*
Release *1979*
Genre *Racing*
Cabinet Styles *Upright*

Long Beach by the Italian manufacturer Olympia. This game is like Atari's Sprint.



1979
188

Jatre Specter

Manufacturer *Jatre*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

This game is exactly like Space Invades only faster.

Kreepy Krawlers

Manufacturer *Exidy*
Release *1979*
Class *Wide Release*
Genre *Action*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *8-way with button [Fire]*
Buttons: *2 [Roate Up|Rotate Down]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

The player controls a character that fights a variety of bugs using a number of weapons.

excerpt from the flyer:

- 1 or 2 player
- Black and white 19” monitor
- High score table
- Self test mode

H 66.75 (169.545 cm)
W 25.25 (64.135 cm)
D 32.00 (81.28 cm)
Operator selectable options
- Coinage
- Bonus score
- Number of weapons

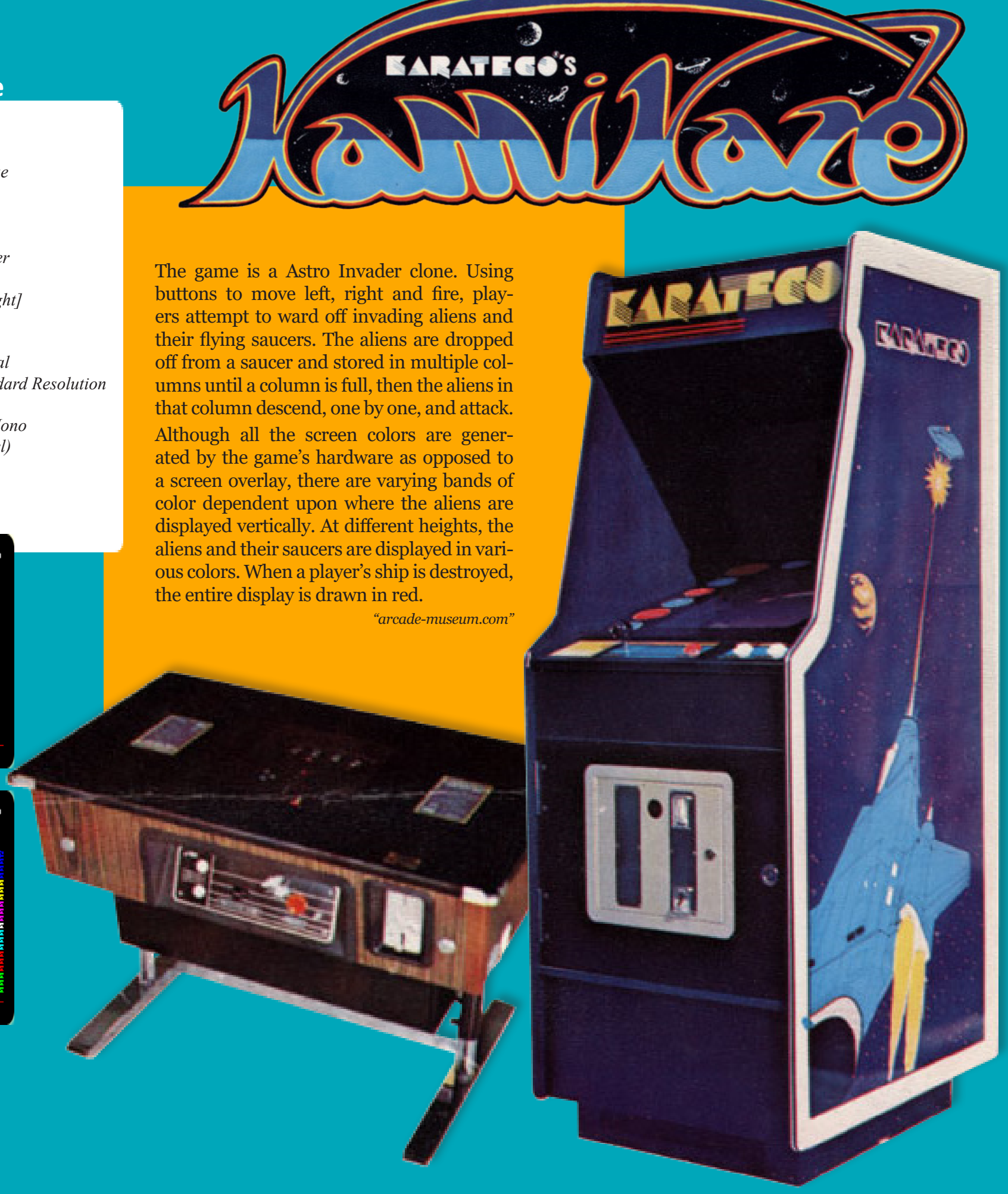
Kamikaze

Manufacturer *Leijac*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *2 [Left|Right]*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

The game is a Astro Invader clone. Using buttons to move left, right and fire, players attempt to ward off invading aliens and their flying saucers. The aliens are dropped off from a saucer and stored in multiple columns until a column is full, then the aliens in that column descend, one by one, and attack.

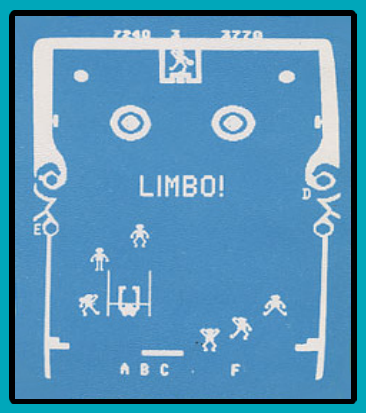
Although all the screen colors are generated by the game's hardware as opposed to a screen overlay, there are varying bands of color dependent upon where the aliens are displayed vertically. At different heights, the aliens and their saucers are displayed in various colors. When a player's ship is destroyed, the entire display is drawn in red.

"arcade-museum.com"



Limbo

Manufacturer *Universal*
Release *1979*
Class *Prototype*
Genre *Ball and Paddle*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



LIMBO

excerpt from the flyer:

"Limbo" is a unique, new game that fully utilizes the features of TV. With all the attractions and amusement of a pin ball machine, "Limbo" opens a new dimension in TV games.

Use your paddle to return the ball against a bumper or hit a variety of targets and build up points.

FEATURES

- A dancer dances across the screen when the ball hits the bonus target.
- The bar under which the dancer passes comes in 3 heights; If the dancer is successful, you get bonus points. (When the dancer fails, no bonus points are awarded.)
- You can make the action more difficult by using the dip switch to bring another paddle into play.
- You can alter playing action by selecting replay points and extra balls.

SPECIFICATIONS

Dimension
66.9" (H)
31.5" (D)
24.4" (W)

Lunar Lander

Manufacturer *Atari*
Release *1979*
Class *Wide Release*
Genre *Space*
Board pin *Lunar Lander Pinout*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Controls
Buttons: *Rotational (left, right)*
Throttle : *Lever*
Buttons: *1 [Abort]*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
19-inch Electrohome G05-801
Sound *Unamplified Mono*
(requires one-channel amp)
Cabinet Styles *Upright*

Lunar Lander is a single-player game in the Lunar Lander subgenre in which the player attempts to land a lunar landing module on the Moon. The game is displayed using black and white vector graphics and depicts a side-on view of the terrain and the landing module. At the top of the screen, the player is given information on the module's speed, altitude, and fuel, along with the score and time spent in the game. The terrain is very jagged and has only a few flat areas appropriate for landing. The player controls the orientation of the module and fires the thruster in order to steer the module to a landing area and land safely. The module is always displayed in the center of the screen, with the terrain scrolling beneath it as it travels horizontally, wrapping the single screen-width of terrain endlessly.

If the player successfully lands the module, they are awarded points based on how softly the module landed and the difficulty of the landing site and are awarded a small amount of fuel for good landings. The safe landing areas are highlighted with a flashing bonus multiplier, which is higher for smaller areas. If the module crashes—which happens if it is moving too fast or rotated too far from vertical when it touches the ground, or if the landing area is not flat—then a small amount of points is awarded. When the lander gets close to the surface, the view changes to a close-up view of the lander. The player has a limited amount of fuel, which is consumed by controlling the module. Whether the player lands safely or crashes, the game starts another round with a different set of terrain and the player's remaining fuel. The game ends when the module touches the ground after running out of fuel.

The game is controlled via two buttons that rotate the module left and right, a large handle that fires the thruster proportionally to how hard it is pulled, and an "abort" button that rotates the

module back to vertical and fires the thruster, burning a large amount of fuel in an attempt to stop the module from crashing. Each action uses fuel, and when the fuel runs out the module no longer responds to the controls. The game features four levels of difficulty, which adjust the landing areas and module controls. The highest difficulty causes the module to continue rotating after it is turned until the player counters the ro-

tation instead of only turning while the button is pressed. The player can adjust the game's difficulty at any time during play. Unlike other arcade games, Lunar Lander does not feature a time limit; instead, the game starts with a set amount of fuel and inserting additional quarters purchases more fuel, allowing indefinite gameplay. The amount of fuel gained per coin, including the initial game starting-coin, is adjustable by the operator to set levels ranging from 450 units to 5400 units.

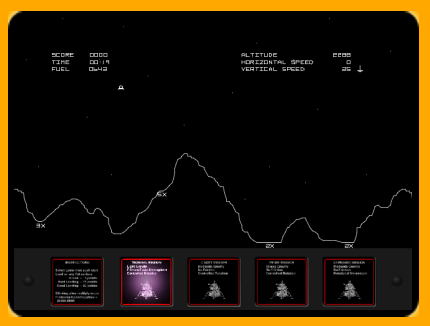
The Lunar Lander concept was initially created in 1969 as a text-based game called Lunar, or alternately the Lunar Landing Game. Many further versions of the game were developed over the course of the next decade; by 1979 the style of game was collectively seen as its own subgenre. The first graphical version of the subgenre, Moonlander, was released in 1973 by DEC, which commissioned a real-time, graphical Lunar Lander game to demonstrate the capabilities of its new DEC GT40 graphics terminals.

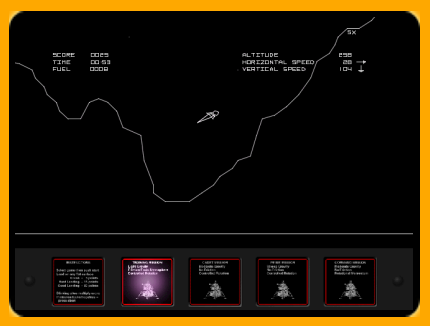
After the release of the 1977 Cinematronics vector graphics game Space Wars, Atari began work on their own vector graphics engine, in which the graphics are constructed by drawn lines instead of pixels like in the more standard raster graphics engines. The initial hardware design work was done by Cyan Engineering, Atari's research and development subsidiary. Once it built an initial hardware concept, the project was passed on to Atari employee Howard Delman, who enhanced the prototype engine into one that could be used by game designers. Once it was done, he proposed using the monochrome game engine for a Lunar Lander game. Delman had previously played Moonlander during a tour of NASA and had played one of the text-based Lunar Lander games in college. In Fall 1978 development of the actual game began, with Delman in charge of the hardware and Rich Moore, who had only been with Atari for a few months and who had also played a Lunar Lander game in college, focusing on the programming.

LUNAR LANDER
LUNAR LANDER
TM
ATARI
• The world's most authentic video simulation of outer space action.
• Players maneuver to land a spacecraft on the moon as many times as possible.
• Visual image magnifies twice size as spacecraft nears landing site.
• Unique "Score Multiplier" landing sites offer bonus scoring.
• 4 player-selectable game "missions" challenge players to different levels of difficulty.
• New Atari-designed 19" vector monitor creates fantastic visual effects.
• New Thruster Control design offers more realistic action.
• Thundering "Thruster" sound effects.

Development began with Moore drawing out the game's graphics on graph paper, after which the pair wrote out the game's code on paper for typists to transcribe. Delman and Moore worked closely together, bouncing ideas off each other as Moore proposed programming designs and Delman iterated the hardware design. One point of contention in the development process was the difficulty of the game; Delman initially wanted the module to move as realisticly as possible, but they determined that the result was almost impossible to actually play. As Delman noted in an interview in 2010, *"even the real lunar landers had computer assist!"* Eventually, they settled on including four difficulty levels, as compared to Moonlander's three, though Delman has referred to the hardest level as *"one of the most painful difficulty spikes in gaming"*.

Delman chose the large handle used to control the thruster: Atari initially planned to use a standard joystick, but he wanted a control with more physicality, including adding a rubber pad at the bottom to give players the impression that they could pull harder for a little more thrust. The thrust control has ten levels of thrust, as compared to the single on or off level of thrust in previous Lunar Landers, though Moore has noted that this gives players more incorrect options to choose from. The game's font was designed by Ed Logg and used for several other Atari vector graphics games. Several planned ideas had to be cut from the game during development. Delman has stated that chief among these was retaining a crater where the player's previous spaceships had crashed; it was cut as the new hardware could not draw enough lines fast enough to handle the detail. He also wanted to add in a McDonald's location easter egg, as was present in Moonlander. Over a year after development started, Lunar Lander was released in August 1979, just after the tenth anniversary of the first manned Moon landing, though Atari did not link this connection in its marketing of the game.





Lunar Lander proved moderately commercially successful, selling 4,830 cabinets. Cash Box noted in September 1979 that the machines were very popular with customers. It was Atari's first vector graphics game and the first multiple-perspective video game with the inclusion of the up-close view of the lander. Atari developed a two-player version of the game, but only two prototypes were ever made as it did not enter production. The two-player version was cancelled as Lunar Lander's popularity was soon overtaken by Atari's Asteroids (November 1979), which used the same vector graphics engine and which had initially been based on Lunar Lander's code. Atari ceased production early on Lunar Lander in favor of shipping Asteroids games in Lunar Lander cabinets; the first 300 Asteroids games were released with Lunar Lander artwork on the side. The Atari Lunar Lander was the most popular version to date of the "Lunar Lander" concept, surpassing the prior Moonlander and text-based games, and most later versions of the concept are implicitly or explicitly based on the Atari version.

In 1977, Atari produced Star Ship for the Atari 2600, which contained several space-related games; one of these was titled Lunar Lander, though despite the name its gameplay involved landing on a surface while avoiding enemy spaceships instead of the gameplay of the arcade game. While Atari did not produce any true sequels or ports of the game, in 1981 Adventure International produced a version of the concept under the title Lunar Lander as part of a series of arcade game clones for the TRS-80 and Atari 8-bit computers, which, though featuring differences from the Atari version, was advertised as "an arcade game simulation". At least one other arcade game based on the Lunar Lander concept was developed around the same time, the non-vector graphics game Lunar Rescue by Taito.

In 1980, Asteroids and Lunar Lander became the first two games to be registered in the United States Copyright Office, though Burness has claimed that Atari also attempted to patent the game design, which was rejected due to his prior Moonlander. In 2012, for the 40th anniversary of Atari's founding, it released a set of its early games as browser-based games as the "Atari Arcade"; Lunar Lander was one of the initial set of eight games. That same year, Lumen Prize-winner Seb Lee-Delisle presented his "Lunar Trails" art installation at the Science Gallery in Dublin, in which a machine draws out the cumulative paths taken by players of a Lunar Lander arcade game.

excerpt from the flyer:

Another Atari FIRST!
From Atari advanced computer technology, a unique new concept...

Lunar Lander™ is the first one player game to authentically simulate an actual moon landing mission.

Lunar Lander™ provides the thrills, the realistic "feel", of *controlled space flight!* Players are challenged to control *thrust* and *rotation* of a lunar landing craft to counteract simulated gravitation pull, *momentum* and *friction*.

Various points are awarded for different types of landings: "good", "hard", even for a crash. There's plenty of scoring opportunities because a new mission begins after each landing. The competition for higher scores is irresistible!

4 player-selectable "Missions".
The game begins with the selection of one of four different "missions" rated according to degree of difficulty. Players can progress from "Training" to "Cadet" to "Prime" to "Command".

As skill increases, a more difficult mission can be player-programmed to keep Lunar Lander a constant challenge.

Spectacular visual effects.

Crash! If the spacecraft is not landed precisely level, the spacecraft will crash and explode, sending debris flying into outer space.

Readouts: "Score", "Time" (for current landing), "Fuel" (game time), "Altitude", "Horizontal Speed" and "Vertical Speed" are digitally displayed.

Humorous messages also appear after each mission to delight the player and add to the fun.

Closeup landing action.
As the spacecraft nears the target landing site, Atari's unique vector monitor automatically displays a 2X magnification of the terrain and spacecraft.

Players *and* spectators get a larger, clearer view of the final landing maneuver.

Scoring. More incentive! More cashbox action. A crash awards 5 points, a "hard" landing 15. A "good" landing awards 50 points... plus 50 Fuel Units of game time!

"Score Multiplier" Landing Sites. Bonus Points! At the start of each new pass, various landing sites are randomly designated by blinking numbers. A landing on one of these sites multiplies the basic "landing" score

Abort! A chance to try for the better score. If the spacecraft is hopelessly out of position or in danger of crashing, activation of the "Abort" button will generate maximum escape thrust and reset the display for a new approach.

Add-a-Coin™ Feature encourages continues play.
Players set their own game time. Each additional coin adds extra Fuel Units of time-play.

Exclusive Operator Profit-Options.

Game Time: Game time is operator-adjustable to 450, 600, 750, or 900 "Fuel Units" per credit. Fuel Units are spent whenever the Thruster is used, when a mission is aborted, or when there is a crash.

A warning signal alerts players when Fuel Unit level is down to 100. (It also reminds players to buy extra Fuel Units.)

Four Languages: Operator may select English, French, German or Spanish video message presentation.

Coinage: Left coin mech registers 1 credit per coin. Right coin mech is adjustable to 1, 4, 5, 6 credits per coin.

Built-in Self-Test System.

Lunar Lander's self-test diagnostic system offers light-speed trouble-shooting wherever you moonbase.

Dimensions.
Height: 71.87", 182.54 cm; Width: 25.25", 64.14 cm; Depth: 32", 81.28 cm; Monitor: 19" B/W

Land in the Crater of Remuneration.

Put Lunar Lander to work now. Get all the details on this year's space action blockbuster! Contact the mission controllers at your local Atari distributor, today!

excerpt from the manual:

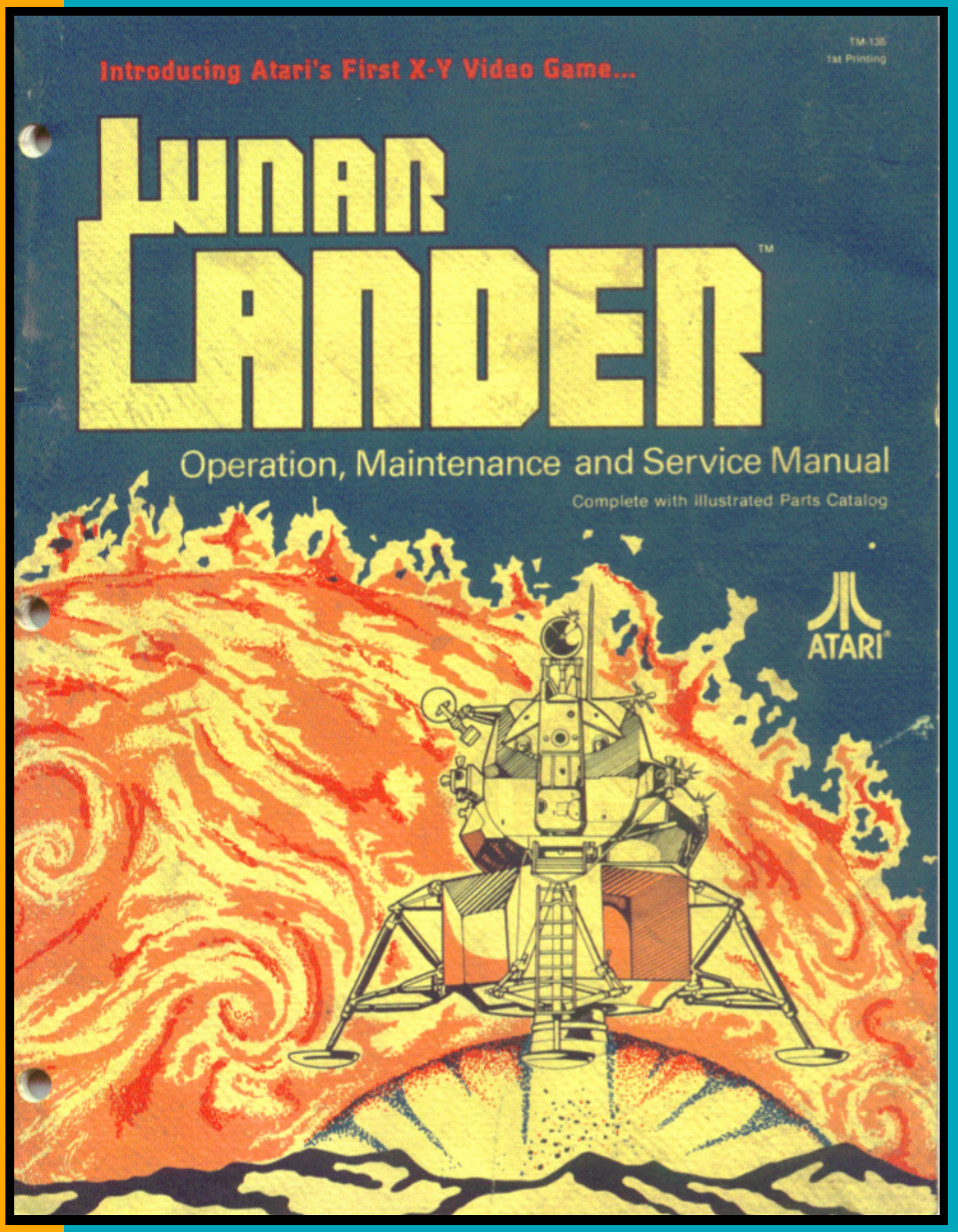
Lunar Lander™ is a one-player coin-operated electronic game that simulates landing a manned spaceship on the moon. Various video-display phases indicate score, time elapsed during this landing mission, fuel units consumed, altitude above the moon, and horizontal and vertical speed. The fuel consumption and both speed readings are important for the player to determine how to land the craft. Realistic engine rumble and crash sounds accompany game play. A high beep warns of an almost-depleted fuel supply, whereupon players can add coins to automatically extend the game and "fill up" their fuel tanks. Depending on the quality of the landing or the crash, various messages are displayed on the screen.

The Lunar Lander game has four basic modes of operation: attract, ready-to-play and self-test. The *attract mode* starts after power-up, after the play mode, or after the self-test. It ends when a coin has been inserted into either coin slot. The *ready-to-play* mode follows the attract mode and begins after a coin has been inserted. It ends with the pressing of the LED start switch.

The *play mode* begins immediately after the ready-to-play mode, when a player presses the start switch. (The game does not automatically start after a certain time has elapsed, i.e., pressing the start switch is the only way Lunar Lander will being the play mode.) The self-test is a special mode used for verifying proper game operation. It begins with the self-test switch set to on, and ends when the switch is set to off.

Due to its solid-state circuity, this Atari unit should require very little maintenance and only occasional adjustment.

The exterior of the game cabinet and the three acrylic panels may be cleaned with any non-abrasive household cleaner. If desired, special coin machine cleaners that leaves no residue can be obtained from your local distributor. Do *not* dry-wipe any of the acrylic panels, because any dust can scratch the surface and result in fogging the plastic.



Lunar Rescue

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Space*
Hardware *Taito 8080*
Board pin *Lunar Rescue Pinout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *1 [Fire/Thrust]*
Joystick: *2-way (left, right)*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Lunar Rescue, also known as Galaxy Rescue, is an arcade game released by Taito in November 1979. The gameplay has some resemblance to both Taito's own 1978 hit Space Invaders (and is sometimes listed as a Space Invaders spin-off) and Atari's Lunar Lander (released just several months earlier).

The game starts with the player's spacecraft docked inside the mothership at the top of the screen. Below the mothership is an asteroid field and below that, the surface of the moon. There are three platforms which can be landed on and six stranded astronauts that need rescuing. Players control a small spacecraft. They must press the button to release their spacecraft from the mothership and manoeuvre through the asteroid field. The craft can only move left or right or use up a finite amount of fuel by engaging the thrust (the same button again) to slow its descent. If the craft is landed successfully on one of the available platforms, one of the astronauts will run towards and board the craft.

The asteroid belt now changes into a swarm of flying saucers, some of which drop bombs. Players must now guide the spacecraft back up to the mothership (the craft ascends without using up fuel), avoiding the flying saucers. The thrust button is now a fire button which can be used to shoot at enemies above (as in Space Invaders). Finally, the craft must be docked with the mothership using the bay opening. If the side of the mothership or any part of the ship outside of the opening is hit, the rescued astronaut falls to the surface and dies. If the mothership is missed altogether, the craft explodes. After all six people have been rescued (or killed providing the player still has lives remaining), the game starts again at a higher level.

excerpt from the flyer:

Play Instructions for Lunar Rescue

- Select game for one or two players.
- Push red button to descend from mother ship to rescue astronauts.
- Find a landing are as you avoid crashing into shooting stars.
- Pushing red button will control the landing speed of the rescue ship.
- After landing, return to mother ship.
- Push red button to shoot at flying saucers. Control rescue ship to dock with mother ship.
- When docking is accomplished and astronauts saved, the following points are scored:

1st frame 50 points each astronaut
2nd frame 100 points each astronaut
3rd frame 150 points each astronaut
4th frame 300 points each astronaut
5th frame 300 points each astronaut

- One rescue ship will be awarded when score reaches 3,000 points.
- Landing six (6) times in a frame-astronaut-rescue points and remaining fuel points are added to your score.
- Flying saucers destroyed score 30 or 50 points.
- Rescue all six (6) astronauts in a frame for bonus points.

Pushing red button produces different effects at different stages of play. At beginning of game push red button to leave mother shop. Enroute to landing, push red button to slow your descent and avoid meteorites. Enroute to docking push red button to:

A. Fire missiles
B. Accelerate vessel speed

On your way to deck into the mother ship, shoot down as many enemy vessels as you can. This will enable you to score points for docking and points for enemy vessels.

The game uses hardware similar or identical to Taito's Space Invaders and supposedly a ROM swap will convert one game to the other.

Master's Game

Manufacturer *Olympia*
Release *1979*
Genre *Breakout*
Cabinet Styles *Upright*

Master's Game was made in Italy. It's similar to Break-out.

The game was perhaps distributed under the brand name Leante Games.

Meteor Part II

Manufacturer *Hoei (?)*
Release *1979 (?)*
Genre *Shooter*

Meteor Part II was probably and Asteroids clone.

Meteorites

Manufacturer *Video Gelectronic Games*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Meteorites is a bootleg version of Atari's Asteroids, most commonly seen around Canada.

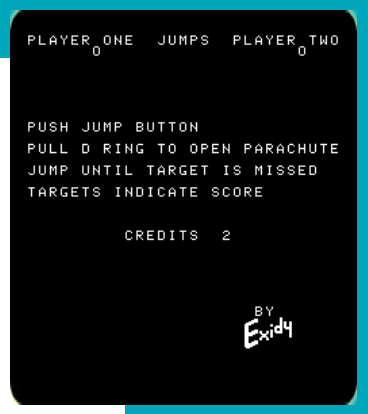
It's virtually identical to the Atari, except it comes up with "METEORITES BY VGG" in place of the (C)Atari etc. at the bottom of the screen, and the logo flashes as well. There are a few changes in the sounds, looks like just some resistor and capacitor values altered to make the sounds that bit different. It's almost identical to the Atari layout, except it's running on TMS2716s - the tri voltage variant of the regular 2716, and has extra regulators for the voltages they need.

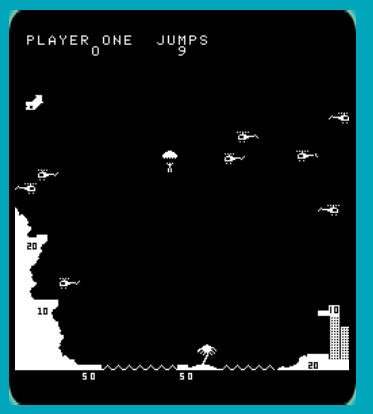
"andysarcade.de"

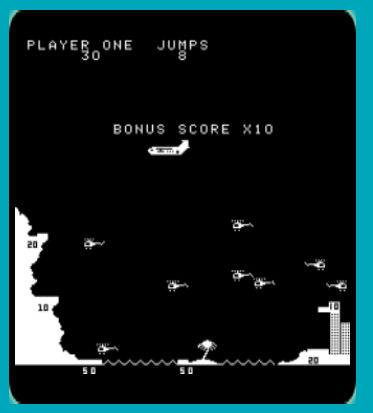
The only picture of the machine I managed to track down

Rip Cord

Manufacturer *Exidy*
Release *1979*
Class *Wide Release*
Genre *Skill*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Rotary: *Special [Drift]*
Buttons: *1 [Jump]*
D-Ring
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*







Rip Cord was designed and programmed by Arlan Granger. The goal of the game is to jump out of the plane and land safely on one of the many targets down below. The challenge is to avoid the numerous enemy helicopters that occupy the sky in between the plane and the ground.

Players control the timing of their jump with the Jump button, at which point they parachutist begins hurtling toward the ground out of control. Pressing the D-Ring button shortly afterwards releases the chute and slows the descent. More importantly, it allows players at this point to control their left/right position via the paddle control to help them avoid the enemies.

"mamedev.org"

Meteoroid

Manufacturer *Subelectro*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

Meteoroid is a bootleg of Asteroids. The arcade machine has laminated glass bezel and marquee. Game PCB is clone of Asteroids Rev. 2.

1979
200

Monkey Magic

Manufacturer *Nintendo*
Release *1979*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

Monkey Magic is a Nintendo arcade game similar to Breakout. Although clearly based on it, enough new ideas are added to call it a game in its own right, not a clone. The goal is to use the paddle and a bouncing ball to destroy a giant monkey face at the top of the screen. Hitting it in different places awards different scores. Sometimes a block will drop, and if players catch it, they get extra points. If the ball falls past the paddle, they lose a life.

"mobygames.com"

Magic Monkey has a wide variety of special score elements to make it fresh and interesting. Some include;

• Hitting one of the monkey's eyes will close it, scoring extra points. After some time the eye will open again. If players manage to get both closed at he same time, they will score extra points

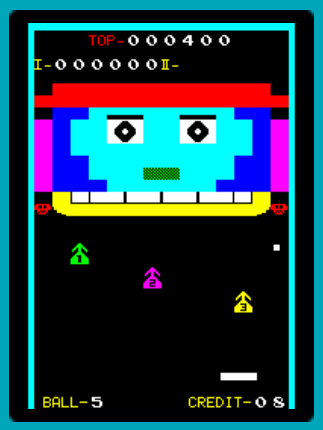
• Players can move the arrows labbled '1', '2' and '3' up, to open the monkey's mouth. Now they can start hitting his teeth.

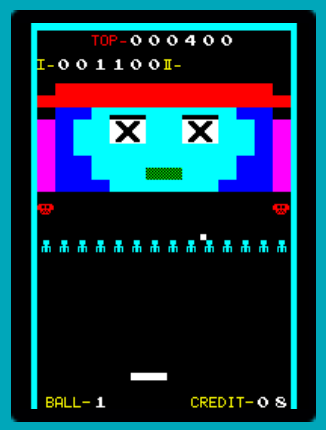
• If players touch his nose, the ball speeds up.

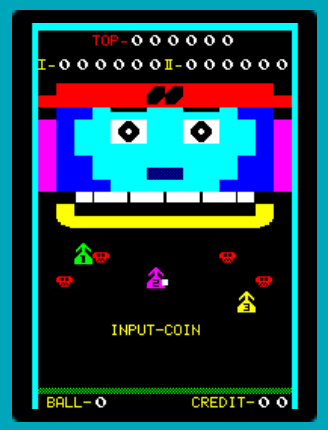
• Players should avoid the little monkey heads dropping down, as they will bounce the ball back before it can hit any of the blocks.

Monkey Magic does not have multiple screens or stages. Blocks that have disappeared reappear again after some time. It is all about racking up the highest score. The game becomes gradually more difficult, as the ball speeds up and the number of small monkey heads dropping down increases.

"beforemario.com"







Ozma Wars

Manufacturer *SNK*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail

Ozma Wars is a 1979 fixed shooter arcade game, and the very first game developed and published by SNK, who were still known as "Shin Nihon Kikaku" at the time. The game is also known as the second ever vertical shoot 'em up game, after Taito's Space Invaders (which ran on the same arcade hardware), but is also additionally known as the first game with disparate "levels". The game is also notable for being the first action game to feature a supply of energy, resembling a life bar, a mechanic that has now become common in the majority of modern action games. The game allowed the player to refuel energy between each level, and it featured a large variety of alien enemies.

The player controls a space craft which must fend off UFOs, meteors, and comets. Instead of lives, the player is given an energy reserve that is constantly diminishing; getting hit by the enemy causes gameplay to stop momentarily and a large amount of energy is depleted. Every so often, a mothership will appear and dock with the player's spacecraft, allowing the energy to be refilled. There are 3-4 recognizable stages as the game progresses and new enemies begin to appear. After these, the mothership will appear, and the cycle starts over; this continues indefinitely until the energy reaches zero.

There are two known bootleg versions of this game called Space Phantoms and Solar Flight. In Space Phantoms the player's ship looks like an angel, and the enemies appear as different types of insects. Due to the game being monochrome and a conversion kit for Space Invaders, many Ozma Wars monitors still utilized the Space Invaders color overlay.

Moon Base

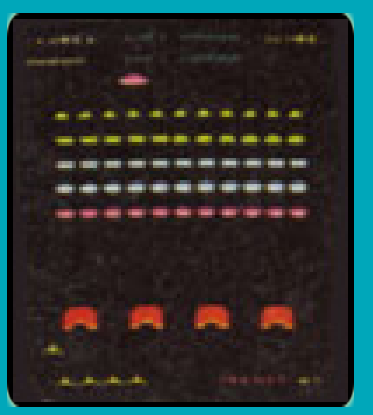
Manufacturer *Nichibutsu*
Release *1979*
Genre *Shooter*
Cabinet Styles *Upright*
Cocktail

Nihon Bussan had to settle with Taito by paying a license fee to launch a copy of Space Invaders titled Moon Base.The same year, the company issued brochures that listed both Moon Base as original works of Nihon Bussan.

3 versions were made, Moon Base, clone of Space Invaders (black and white), Moon Base Spector, clone of Space Invaders (color), and Moon Base Zeta, clone of Space Invaders Part II, which is in MAME.

excerpt from the manual:

• The game may be played by one or two people.
• Insert coins.
• Select one or two player button.
• MONSTERS appear on the screen with their sound of attack. Also moon bases which avoid the bombs from monsters and laser gun which attacks the monster appear below the screen.
• Shooting down UFO and monster by pushing firing button, sliding laser gun to the right or left by moving the control lever to avoid bombs from monster.
• When the laser gun is destroyed by monster, the other player can play. (In case of double game)



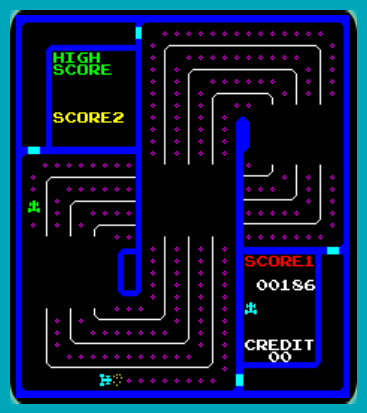
Rolling Crash

The player control a small car that attempts to collect the dots while trying to avoid crashing into the other car.

excerpt from the manual:

When playing rolling Crash a red car (micro-computer-controlled) is driven on a course and the player tries to avoid a collision with his yellow car by changing lanes with a lever. A point is scored when targets are wiped out on a lane. The yellow car's speed is controlled by a button. The racing course is figure-eight-shaped. In 2, 4, 6 or 8 patterns, other lanes are opened, which causes the cars to reverse. It is an extremly thirlling game.

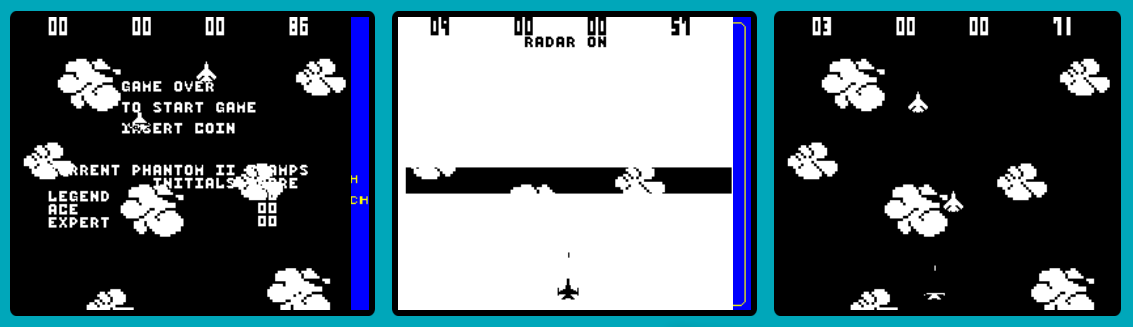
Manufacturer *Nichibutsu*
Release *1979*
Class *Wide Release*
Genre *Racing*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*



2 in 1 Versions
Rolling Crash/Moon Base

Phantom II

Manufacturer *Midway*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Hardware *Midway 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *8-way with button [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Phantom II is a vertical scrolling shooter; it utilizes an Intel 8080 microprocessor (running at: 1.9968 MHz), and the player must use one 8-way joystick to take up control of a Phantom aircraft that is always moving forward, with a single button to make it fire shots at enemy aircraft for points. However, the enemies will hide behind clouds, and the Phantom will have to activate its radar to reveal their positions - and a player will receive extra points for killing enemies with the radar activated. If the Phantom gets hit, its pilot will be ejected into the air and parachute away off the bottom of the screen, before flying back into view from the bottom of that screen, in a replacement plane (for as with many other early Midway arcade games, the gameplay is time-based as opposed to life-based, and it shall be extended if you manage to reach a certain point value before the timer runs out; in a two-player game the game will switch from the first player to the second once his time is up). It is also worth noting that despite its name, this game is not a sequel to a game named "Phantom"

"strategywiki.org"

Rotary Fighter

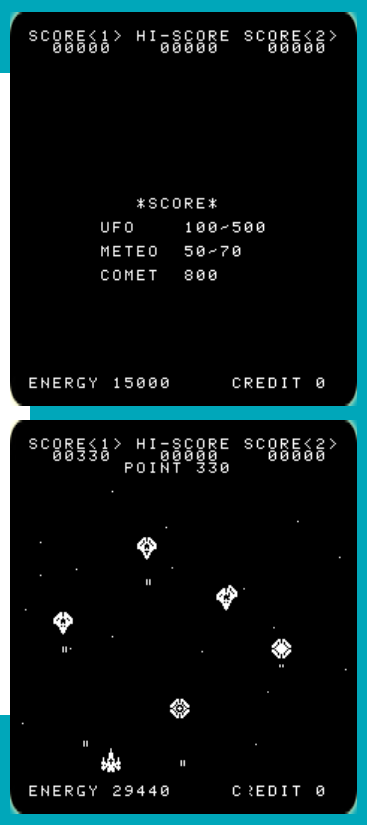
Manufacturer *Kansai Seiki Seisakusho Co*
Release *1979*
Genre *Shooter*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*

The game is a a copy of Space Invaders.

In February 1980, KASCO went bankrupt (because the Space Invaders boom had ended, many small video game companies went bankrupt).

Solar Fight

Manufacturer *"unknown"*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*



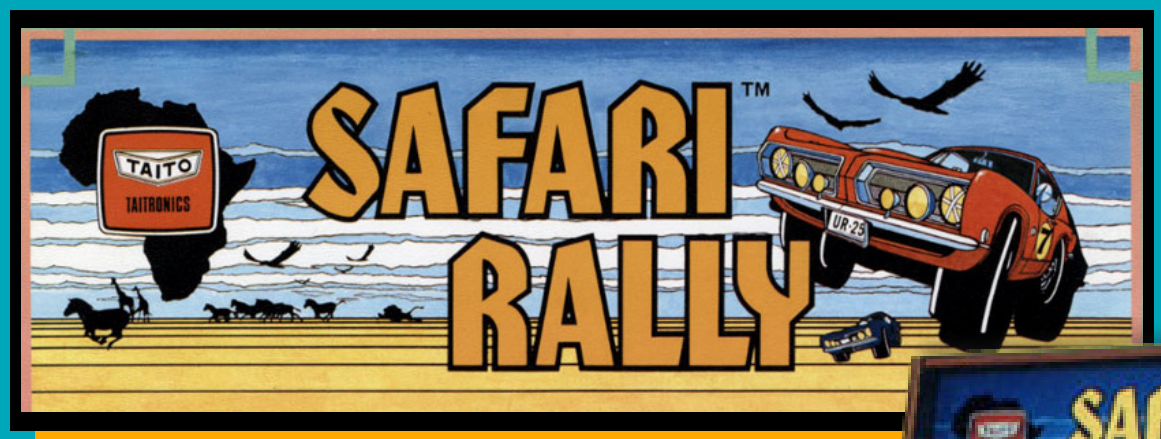
A bootleg of Ozma Wars.

Shuttle Invader

Manufacturer *Omori Electronics Co.*
Release *1979*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Multiple Player*
Cabinet Styles *Cocktail*

Shuttle Invader is a Space Invaders clone that was released only in Japan by Omori Electronics Corp. It features a tank rolling back and forth between bunkers while shooting shuttle invaders. The game has a black and white monitor but the screen is painted with multicolored lines to simulate color play. Very little information is available on the game as the Omori company now makes automobile gauges and other auto electronics.

"arcade-museum.com"



Safari Rally

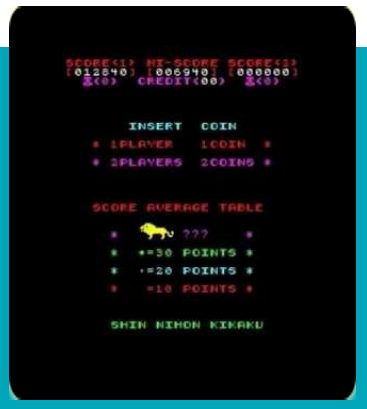
Manufacturer *SNK*
Release *1979*
Class *Wide Release*
Genre *Maze*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *4-way*
(up, down, left, right)
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono*
(one channel)
Cabinet Styles *Upright*
Cocktail

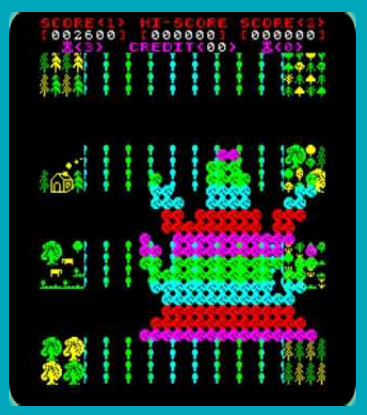
Safari Rally is a maze game where the player guides a car through a maze-like forest collecting coins while avoiding an enemy cars and snakes.

Each coin that is collected has a different point value. Small coins are worth ten points, medium coins are worth 20 points and large coin are worth 30 points.

This was the second SNK game, the first was “Ozma Wars”.

In the the original Japanese arcade flyer ‘SNK Original Games’, it shows a poor translation of the name of the game as ‘Safari Rary’.





excerpt from the flyer:

“JUNGLE ADVENTURE IN VIDEO”

FEATURES

The 20”/14” color monitor captures the realism and excitement of Safari Rally driving.
At the flick of a switch, a white car approaches. You must avoid it and select the safest course, in a maze. When the first formation of dots is extinguished, 2 opposite cars dash at you from the upper screen. You must avoid them and run over the “LION” and “SNAKE” in order to score mystery points.
NEVER BE OFF GUARD, SKID ZONES ARE DONGEROUS!
When 4 patterns are cleared, 3 cars rush at you!! Only skilled drivers make it!! Now is the time to experience “SAFARI” driving!!

INSTRUCTIONS

- Insert-coin(s).
- Select game for one or two player.
- Control your car to clear dots as you avoid crashing into computer-controlled cars.
- Pushing speed button will increase the speed of your car.
- Scoring points: 10, 20, or 30 points per dot.
- When all dots in a frame are cleared, bonus points are added to your score.
- The number of computer-controlled cars is increased to:
  - “2” ... in 2nd, 3rd, and 4th frame
  - “3” ... in and after 5th frame
- When your car hits lion or snakes, some mystery points are scored. But, when your car nears the mouth, your car will disappear.
- One car will be awarded when score reaches 5,000 points.

DIMENSIONS

	(Upright)	(Table)
Height	68”	24”-28”
Depth	35”	22”
Width	24”	34”

Side Trak

Manufacturer *Exidy*
Release *1979*
Class *Wide Release*
Genre *Action*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Buttons: *1 [Accelerate]*
Joystick: *4-way (up, down, left, right)*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Unamplified Mono (requires one-channel amp)*
Cabinet Styles *Upright*

excerpt from the flyer:

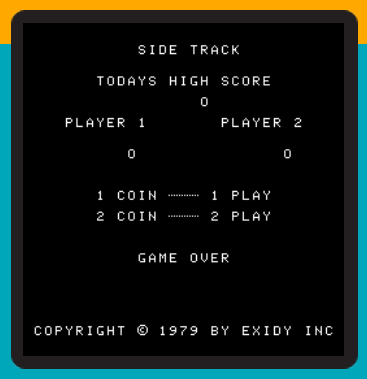
- Intrigue, palm-sweating excitement of an Orient Express
- If you liked CRASH, you'll LOVE Side Trak
- Score points as you pick up passangers along the track
- Computer-controlled "drone" train opposes players
- Authentic "whistle-stop" sound
- Daily high score display
- Accelerated-speed control button
- Switch onto "Side Trak" to avoid collision
- Optional BEAT THIS SCORE feature
- Operator-adjustable coinage
- Operator-adjustable plays

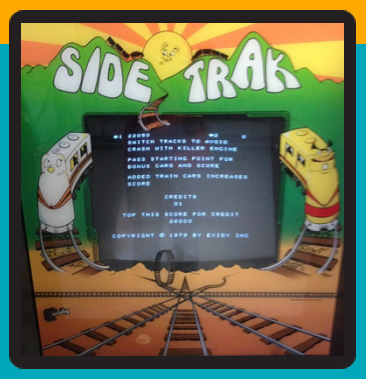
Side Trak is a black & white man-versus-machine game where the goal is to pick up all of the waiting passengers with the train while avoiding the computer-driver "killer engine" which aims to take players out in a head-on collision. Players can control their train via the "fast" button which allows them to temporarily increase the speed on the tracks. Players can also use the joystick to switch between several tracks at various junction points.

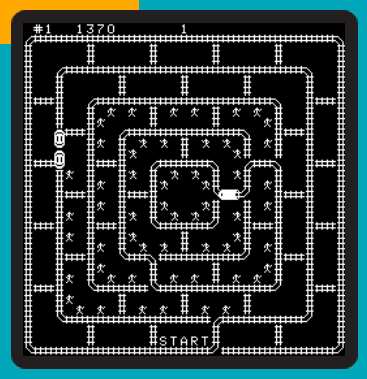
Each time players make a complete circuit around the track and pass the start marker on the outside track, another car is added to their train. Passengers picked up from the outermost track are worth 10 points. Passengers picked up from each successive inner track are worth an additional 10 points. On top of that, passengers picked up when players have additional cars in tow add another 10 points to car.

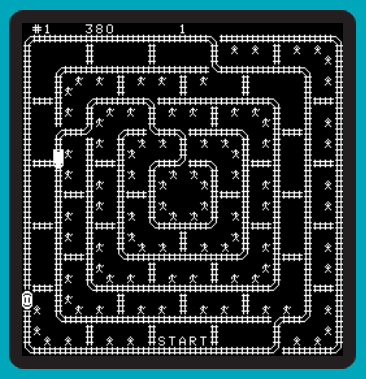
Side Trak is the first of several games that were developed on a common Exidy platform which would eventually become host to their most popular games. Early revisions of the platform — Side Trak included — had custom sound generators tailored for each game, along with a primitive tone generator that could play one of two very short preprogrammed sequences of notes. (Later games eventually included a common sound system.)

"mamedev.org"









Space Combat

Manufacturer *"unknown"*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Gameplay *Alternating*
Panel Layout *Multiple Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*

Space Combat is a clone of Taito Space Invaders, with a slight difference where the Mother Ship has a level of intelligence. It appears to have three different characteristics patterns; comes out and travels across the screen, comes out, travels half way across then turns back to its entry point side of the screen, comes out and then turns back straight away. The Invaders have their regular pattern and attributes.

"arcade-museum.com"

Solar War

Manufacturer *Atari*
Release *1979*
Class *Prototype*
Genre *Pinball*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Atari made 5 prototypes as a sequel/ follow up to the 1979 Video Pinball. But with the success and demands of games like Asteroids, Battlezone, etc this game was set aside. On a side note it was also suppose to be "SUPERMAN" but licensing on it fell short. So in-game text was quickly changed to (SolarWar) which has the same number of letters as Superman since the programing was already finished. Later that year Atari released Superman as a full wide body pinball and the Solar War project was later shelved and reportedly sold off to a Greek distributor/operator company as a kit BITD. Only 3 original Solar Wars are left known to exist.

"This Old Game@youtube.com"

Space Fighter

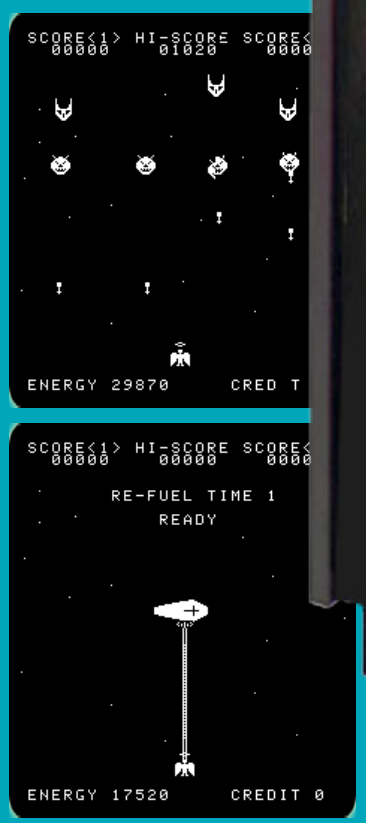
Manufacturer *Sega*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

An alien invader shooter from Sega.

No information or pictures where found other than a mention on arcade-museum-com

Space Phantoms

Manufacturer *Zilec*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



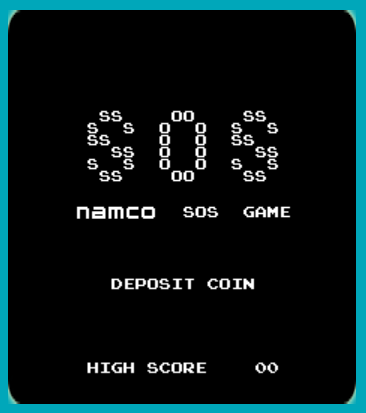
Space Phantoms is a copy of Ozma Wars with new graphics and super-natural theme.

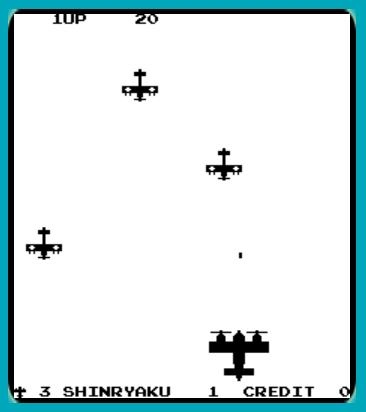
Players, as an angel, shoot advancing witches, ghosts, shooting stars and other dark spectres before their energy runs out. Players become reenergized by entering a coffin.

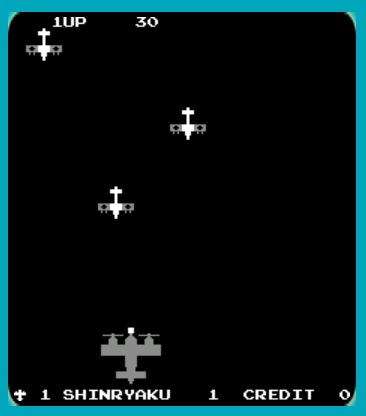
"arcade-museum.com"

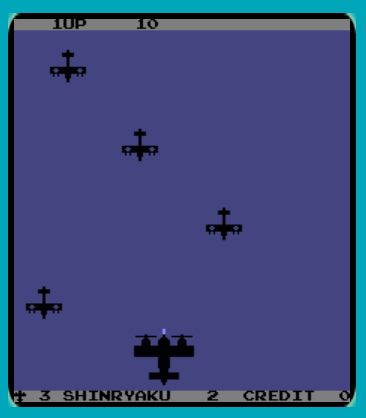
SOS

Manufacturer *Namco*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Hardware *NAMCO 8080*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*









SOS was the last of the three monochromatic arcade games released by Namco, in early 1980; the first two were Navalone and Kaitei Takara Sagashi (and the latter was originally created by K. K. Tokki as a prototype). It's a fixed shooter in which players must use a 2-way joystick to direct a fighter plane known as a "Shinryaku" across the bottom of the screen while enemy planes fly down towards it from the top of the screen - and they can press the Firing Button to make the Shinryaku fire bullets from its nose at the enemy planes to destroy them for 10 points apiece. Players can only fire one bullet at a time, and if they miss, they have to wait for the bullet to go off the top of the screen before they can try again - and occasionally, a flashing arrow will appear and point to either side of the screen, while an "SOS" signal is being heard in Morse Code. If players can manage to make it to that side of the screen before it disappears, they'll receive 30 extra points, and the number of enemy planes that have bypassed their Shinryaku will decrease by 9 (but if it is under 9, it will have no effect); if the number of enemy planes that have bypassed the Shinryaku amounts to 100, the game will immediately end regardless of how many lives players have remaining, which can be annoying for all players who have not lost a single life. It's also worth noting that when players fire a shot at an enemy plane to kill it, the resulting explosion can kill the Shinryaku as well - and this may also be annoying for the players who can't get away in time.

One of the reasons this game is infamous, is because of the "coffee breaks" it takes after every 2000 points, depicting a young woman above the text of "X000 TEN, COFFEE BREAK" (X being any even number and ten, written in Kanji as "points" in Japanese); on the first two times, she will be wearing a bikini, but if the arcade owner has set the "nudity" dip switch to "on", she will be topless after 6000 points, and completely naked after 10000 points. As a result, this could be considered the first game from Namco that is not suitable for all ages, eight years before their Japan-exclusive beat 'em up of Splatterhouse was released - and they would not feature nudity in any of their subsequent games, at least not until another of their Japan-exclusive titles, Dancing Eyes, was released in 1996.

"strategywiki.org"

Space Attack

Manufacturer *Sega*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Hardware *Sega VIC Dual*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*
Cocktail
Wall Hanging/Mini

Space Attack is a fixed shooter arcade game that was released by Sega in 1979; it was the first title to run on their then-new Vic Dual hardware (a Zilog Z80 running at 1.93356 MHz) and appears to be a clone from Taito Corporation's legendary Space Invaders which was released in the previous year. However, the background is blue instead of black, the scores have been multiplied by ten and all the characters have been altered - and if the arcade operator has set that "Last UFO Awards Bonus" dip switch to "On" you will receive an extra life if a UFO flies into view at the top of the screen at the end of a stage and you manage to shoot it, regardless of points. The rest of the rules remain unchanged; however, games could last longer than those of Space Invaders, due to its "last UFO bonus" feature.

"strategywiki.org"

In the US it is thought to have been renamed Super Space Attack - whether there are in fact two separate games is currently unknown, but the two are extremely similar and "Super" is often dropped in internal Super Space Attack documents.

"segaretro.org"

SPACE ATTACK

Used

Alt

An alternate version of the player ship is stored just before the final graphic.

Video Games GmbH German Release

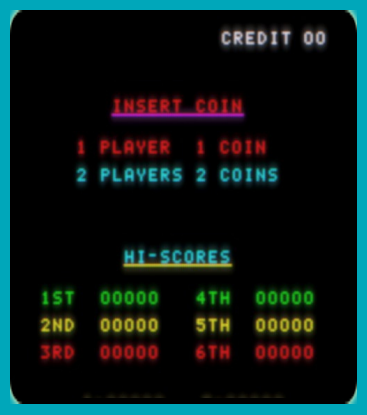
Space Launcher

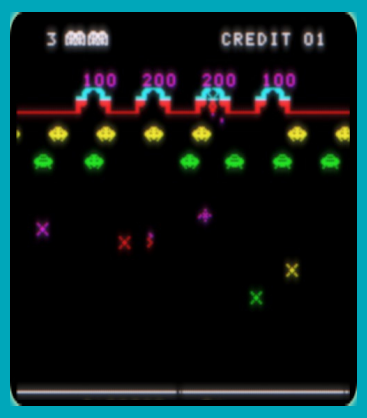
Manufacturer *Nintendo*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

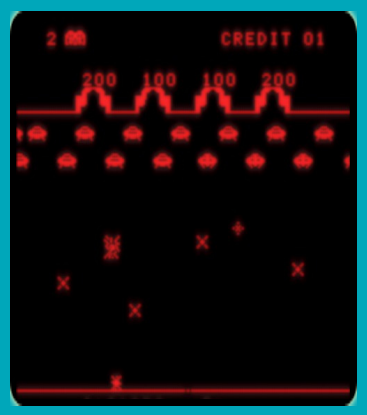
Space Launcher is an arcade video game by Nintendo that was surprisingly original (many of the games Nintendo made during the late 70's were clones of popular titles like Pong, Space Invaders and Breakout).

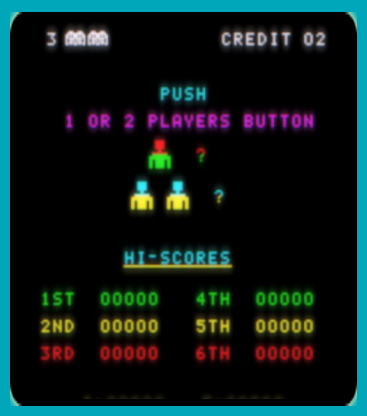
The game is similar to Frogger, though is not a clone since it predates it by at least two years. The objective of the game is to fly the rocket up to any of the four ports to pick up treasures (points), fly back down to the starting point and repeat while avoiding enemies and projectiles. When the rocket flies near the enemies on top of the screen, the damaging shield on the tip of the rocket's nose turns on, allowing players to destroy enemies with it. Point values increase as players become more successful in destroying more than one enemy. Players have a limited amount of rockets to fly, and when all of them are destroyed, the game is over.

"giantbomb.com"



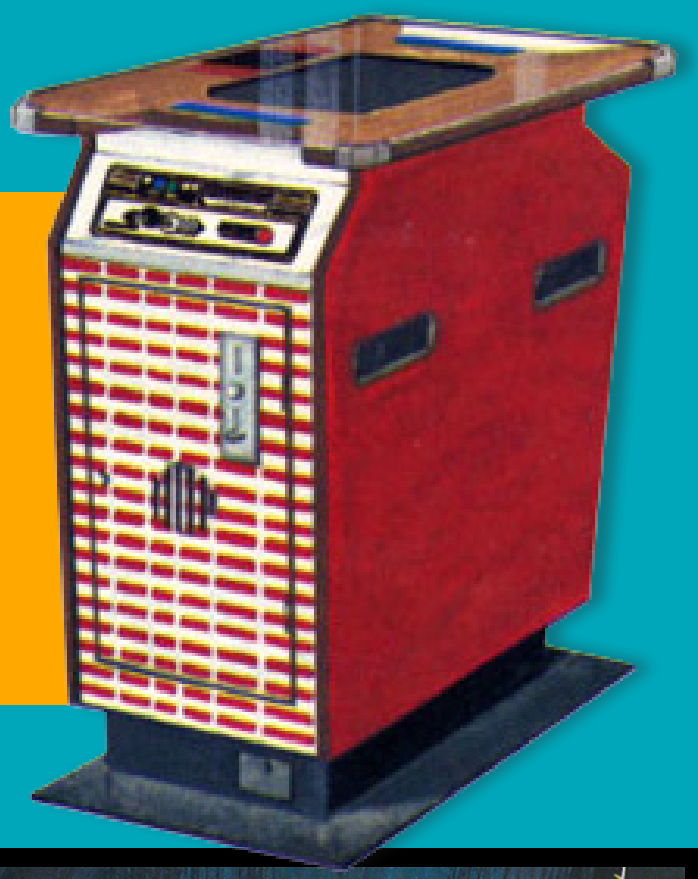






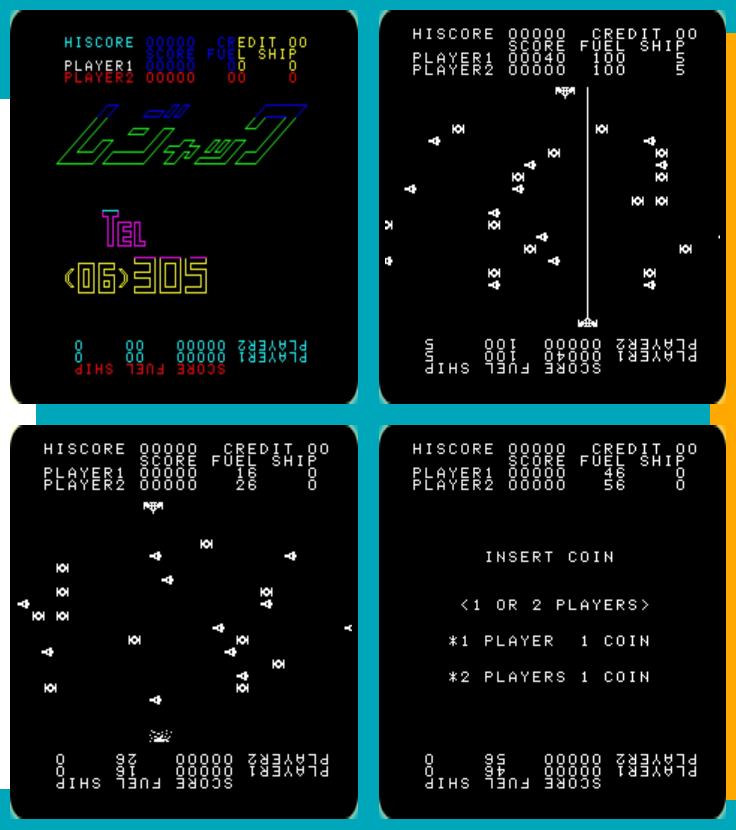
As most early arcade games, Space Launcher was available in two cabinet types: ‘cocktail’ or ‘upright’. Nintendo offered two cocktail cabinet versions: the most common one for sitting down and a slightly higher type (shown here) to stand at.

The game’s poster seems to be inspired slightly by the Star Wars films, which were very successful at the time of this game’s release.



Space War

Manufacturer *Konami*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Space War, licensed by Leijac, is a copy of Space Laser. Players shoot the laser at the top of the screen before it shoots them. Also, they have to shoot or hide behind the ships moving horizontally across the screen.

When the fuel reaches a high number (around 75), players laser will reach the other side of the screen to get the opponent. Once players fire their laser their fuel drops sharply and they must wait for it to build before they can shoot at their opponent again.

From the looks of the screenshots, this game was made for a cocktail cabinet.

The date on this game is 1979 but the date on Space Laser is 1980. It may be that Space Laser was made first but not released by Taito.

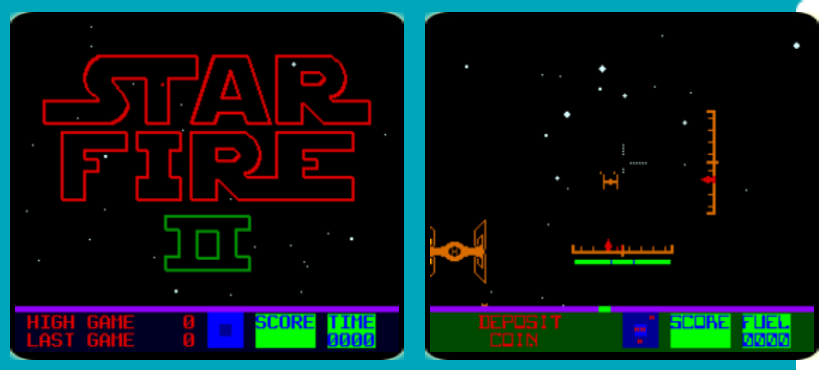
"arcade-museum.com"

Star Wars

Manufacturer *"unknown"*
Release *1979*
Class *Bootleg*
Genre *Shooter*
Hardware *Taito Classic*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Launch/Thrust]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

Star Wars is a bootleg of Galaxy Wars.

Star Fire II

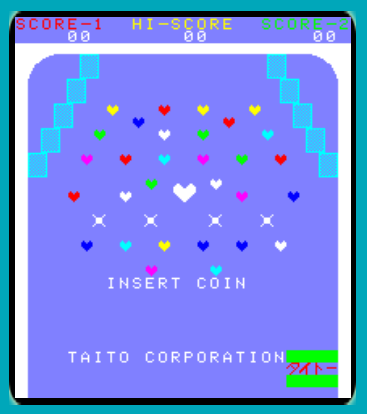


Manufacturer *Exidy*
Release *1979 (?)*
Class *Prototype*
Genre *Shooter*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: *TV Monitor*
CRT: *Color*
Sound *Amplified Mono (one channel)*

Star Fire II is an unreleased sequel to Star Fire with very simular gameplay and changes that mainly involved high score enhancements and sharpening of graphics. Presumably just suppossed to be a ROM upgrade.

Straight Flush

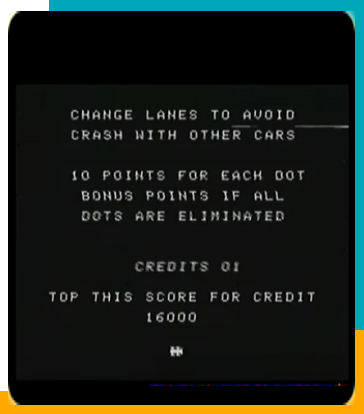
Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*



Straight Flush is a colorful card/Breakout game from Taito.

Splash

Manufacturer *Atari*
Release *1979*
Class *Wide Release*
Genre *Racing*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



Splash is a copy or license of Exidy's Crash. It was possibly only released in Europe. The cabinet depicted here was found in the UK on an abandoned cruise ship.

Submarine

Manufacturer	*Midway/Namco*
Release	*1979*
Class	*Wide Release*
Genre	*Shooter*
Hardware	*Midway 8080*
Mode	*2 Players*
Gameplay	*Alternating*
Panel Layout	*Single Player*
Controls	**Periscope with two buttons on left and right handles**
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright*

Submarine is a mechanical arcade game that was released by Namco in September 1979, and was licensed to Midway for US manufacturing and distribution.

The player uses the yellow periscope to aim at the moving submarines on the screen. Pressing the button on the right handle will fire a torpedo, and the goal is to shoot down all of the submarines in the fastest amount of time. The farther the submarine is, the more points the player will receive, with green being the closest, and red being the farthest. The game ends when the timer on the cabinet reaches zero.

A remake, titled Submarines was shown at the AOU 1999 Amusement Expo in Japan, and ran on Namco System 12 hardware. This version uses a binocular-style periscope with the screen being inside. A prototype was made, but was never released.

excerpt from the flyer:

MIDWAY'S Explosive
Action-Packed Attack at Sea!

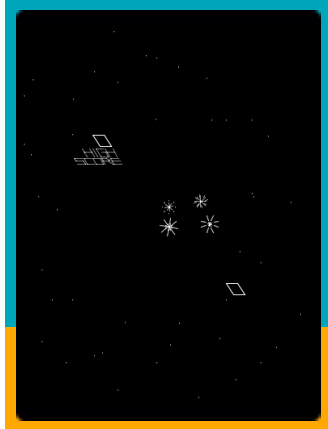
The scene is set. A rippling ocean with clouds drifting overhead. On the horizon, a fleet of different color destroyers travel in convoy, escorting the 'black raider' battleship. The player is the captain of the SUBMARINE. The authentic periscope is 'up'. Torpedoes are loaded. The skipper sights and aims at each moving target. A press of the firing mechanism sends the projectile on it's way. A hit becomes a vibrating explosion of sound and color. Special effects are added and extra points are scored when the 'black raider' is sunk.

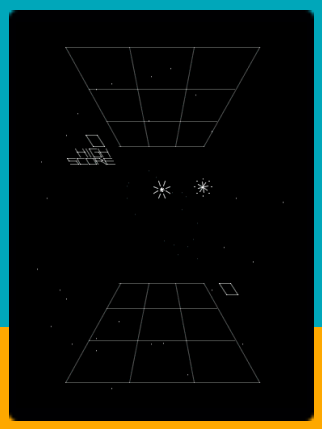
Extended play and game time is adjustable in this exciting electro-mechanical single-player game. The attractive cabinet invites play-action.

Height:	74 1/2" (189 cm)
Width:	30" (76 cm)
Depth:	32 1/2" (82 cm)

Sundance

Manufacturer *Cinematronics*
Release *1979*
Class *Wide Release*
Genre *Puzzle*
Hardware *Cinematronics BW Vector*
Mode *2 Players simultaneous*
Gameplay *Either*
Panel Layout *Multiple Player*
Controls
Buttons: *9 [123456789 3x3 matrix]*
Buttons: *1 [Nova]*
Monitor
Orientation: *Vertical*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Sundance is a puzzle arcade game using vector graphics. The game consists of two grids floating in a pseudo-3D space with small suns bouncing between them. The player score points by capturing the suns as they make contact with the grids. The player also has a limited-use “smart bomb” button which will eliminate all of the suns currently bouncing between the grids. As the suns bounce, the grids will move closer and closer, making gameplay more difficult. The game end when the grids fully converged.

The game itself had only a small production run and was plagued with hardware failures due to its unconventional design. According to Tim Skelly, the game’s designer, Sundance used an additional daughterboard that controlled the intensity of certain vectors. This board and its connections were rather fragile and prone to failure. Also, the monitor used a defective carbon coating spray which tended to cause the monitor’s tube to arc if it was left in a certain position, destroying the monitor.

excerpt from the flyer:

The one- or two-player video which features unparalleled action. Players open “space hatches” which catch bouncing suns upon the screen. Player options include the use of two, three, or four suns, and the expert players can not only fire a “nova” out of the hatches, thus destroying the suns, he can also remove the optional grids for increased competition and excitement. All options can be manipulated by the player during play, thus increasing the action as well as operator collections.

Cinemationics’ SUNDANCE introduces a new feature of the Vectorbeam monitor. 16 different levels of line intensity have been introduced into the system, thus creating a magnificent display. A 23” monitor has also been introduced, leading to an even greater display of a great new concept.

SUNDANCE includes six great sounds to mystify the players and attract even more action. Explosions, whooshes, vacuum operated hatches, pings and bongs surround the player or players.

SUNDANCE includes Cinematronics’ coin accumulator for added playtime, which means added collections to the operator. It is operated by a one coin per player minimum, which allows for double profits in two-player action.

1979
220

Super Galaxians

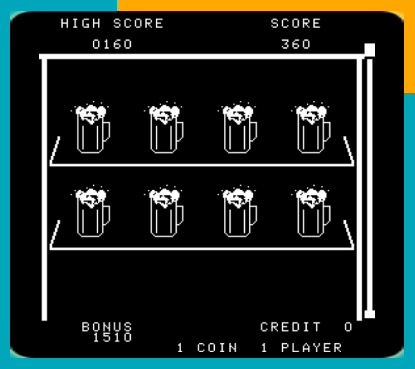
Manufacturer *Midway*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Hardware *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

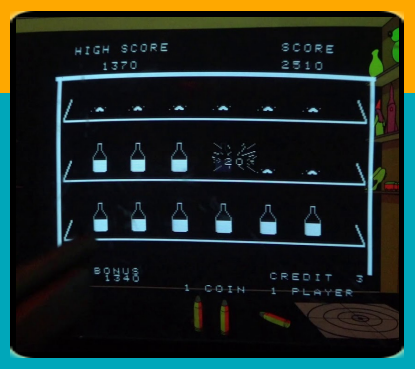
Super Galaxians is a hack of Galaxians. The game plays faster than the original.

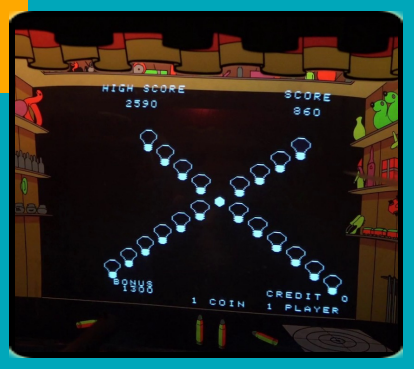
Super Shot

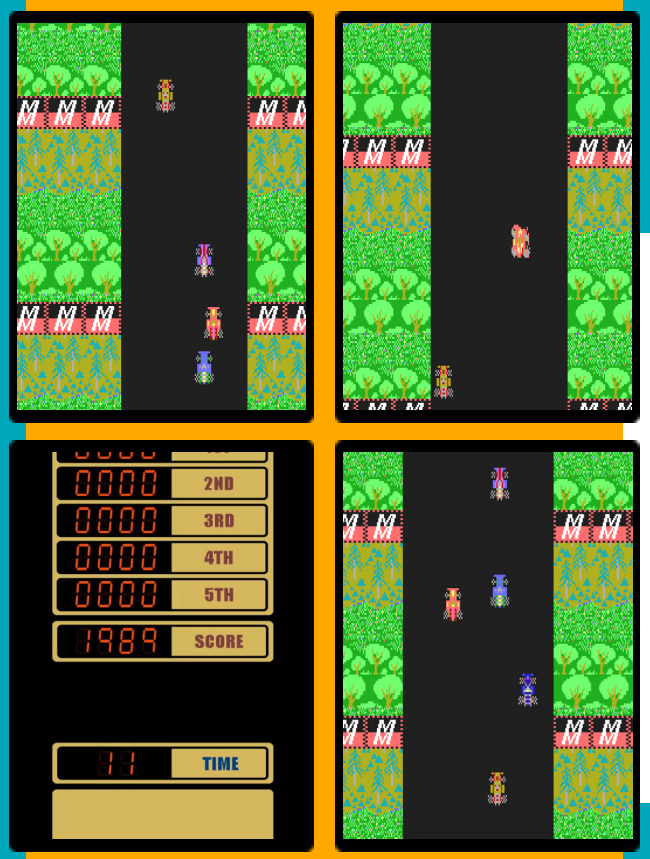
Manufacturer *Model Racing*
Release *1979*
Genre *Shooter*
Type: *TV Monitor*
CRT: *Black and White*
Cabinet Styles *Upright*

Super Shot is a black and white shooting game where the player uses an optical gun to shoot various on-screen targets including balloons, glasses and bottles.



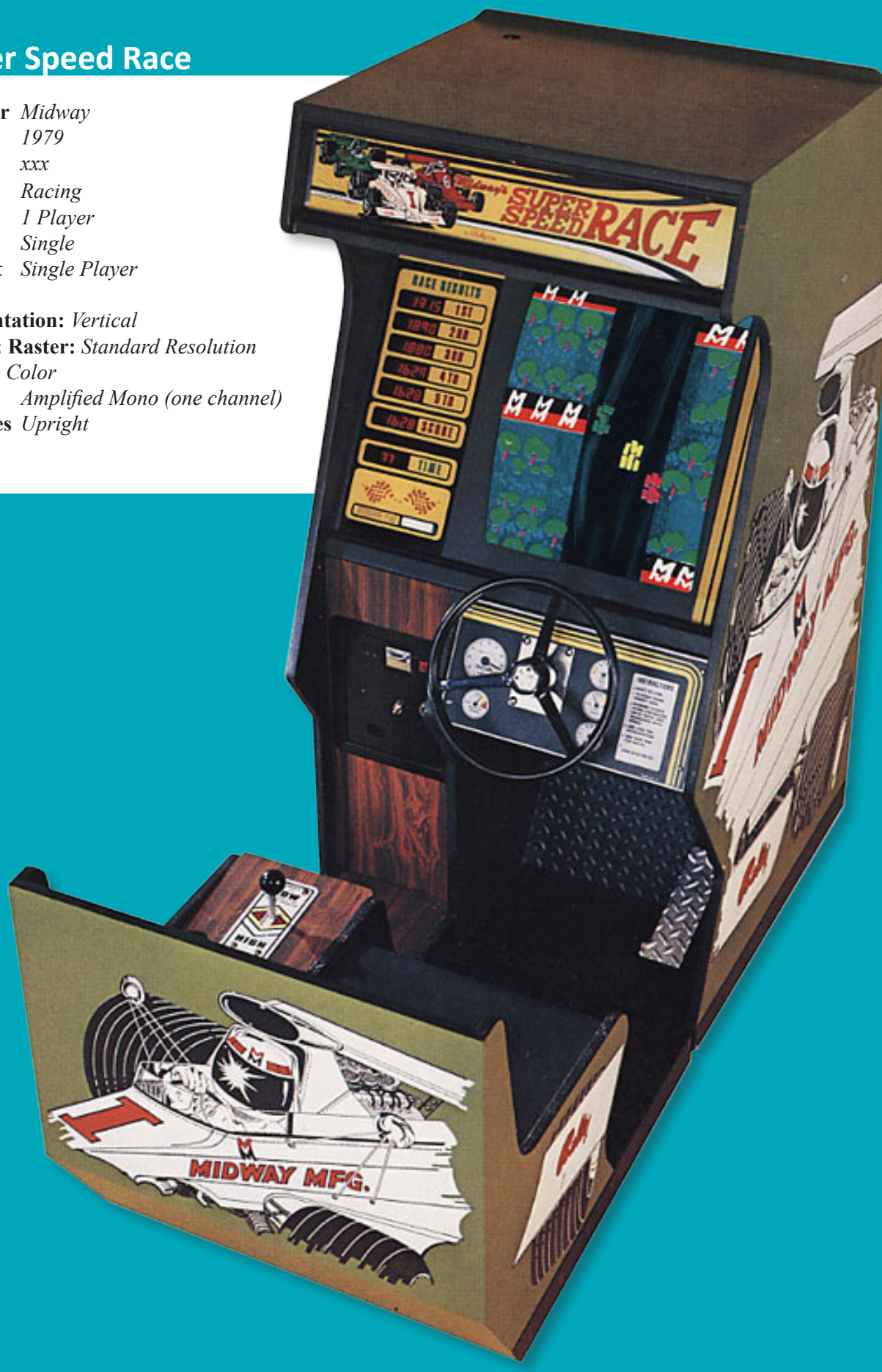






Super Speed Race

Manufacturer *Midway*
Release *1979*
Class *xxx*
Genre *Racing*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*



excerpt from the flyer:

MIDWAY'S FAST ACTION THRILLER

The full color video driving game with realistic excitement that puts ***you*** in the driver's seat for super play action.

The player sits behind the wheel, shifts into low gear, steps on the gas and moves onto the speedway track. A shift to high increases the speed and the scoring - but it takes extra skill to maneuver and pass cars without being hit. 'Crash' sounds mean a hit or going off the road. Player returns to pit stop and must start again. 'Skid' noises warn of icy patches and oil slicks on the road. Extended play and game time are adjustable.

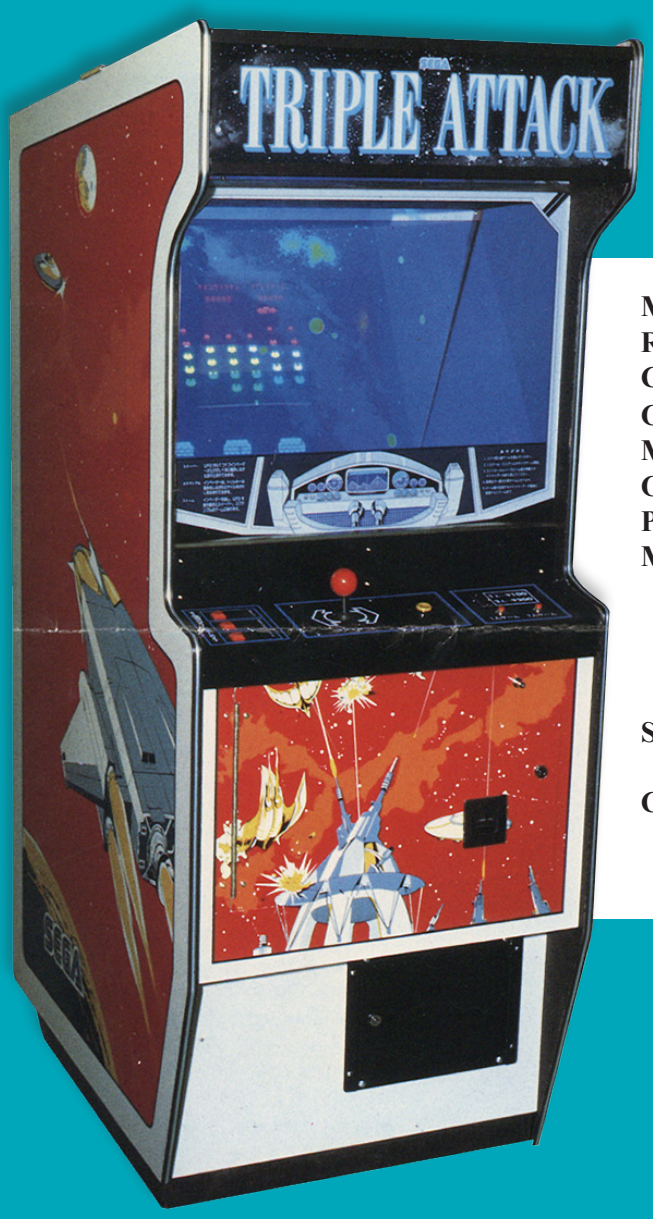
'Race Results' scoreboard permanently displays top 5 scores to challenge all players.

Swarm

Manufacturer *Subelectro*
Release *1979*
Class *Hack/ROM Swap*
Genre *Shooter*
Conversion *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Sire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*

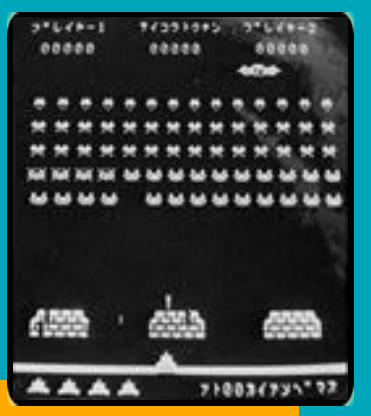
Considered as a hack of “Galaxian”, this game seems more like a hack of “Moon Alien Part 2” by Nichibutsu, but with the graphics changed to look more like “Galaxian”. This explains why the shots move with the ship and why the fuel gauge is there. On Moon Alien the shots move left/right but there is no fuel gauge. Galaxian also didn’t use a ‘title screen’ formed with graphics, it went straight through to ‘We are the Galaxians’.

“gamesdatabase.org”



Triple Attack

Manufacturer *Sega*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright (?) Cocktail*



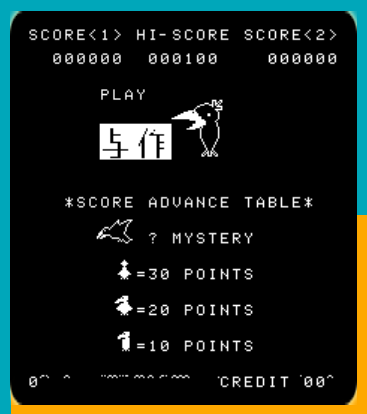
Triple Attack is a Japanese upright arcade cabinet containing three Space Invaders derivatives. It is an extremely rare arcade machine, and thus very little is known about it.

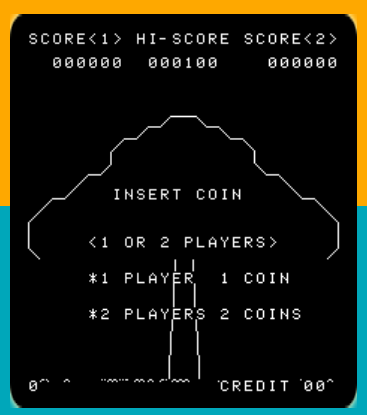
Yosaku to Donbei

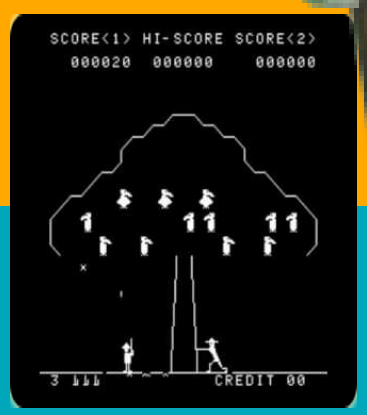
Manufacturer *Worldwing*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

In Yosaku players shoot the birds in the trees, avoid the things they drop, and try to shoot the flying crow for mystery score.

The game run on Space Invaders hardware.







Tail Gunner

Manufacturer *Cinematronics*
Release *1979*
Class *Wide Release*
Genre *Space*
Hardware *Cinematronics B&W Vector*
Mode *1 Player*
Gameplay *Single*
Panel Layout *Single Player Ambidextrous*
Controls
Joystick: *Analog*
Buttons: *2 [Fire|Shield]*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

Tail Gunner is a monochrome vector arcade game. The premise of the game is that the player is the tail-gunner of a large space ship. Enemy spacecraft attack the vessel in groups of three, and the player must aim a set of crosshairs and shoot the enemies before they slip past the player's cannons. Because of the game's depicted viewpoint, instead of appearing to fly into the starfield, the stars move toward the center of the screen.

In addition to shooting down the enemy ships, the player is also given limited use of a shield that can block ships from passing. The game ends when ten ships slip past the player's cannon.

The game was sold as Tail Gunner II in a sit down cabinet and its controls consisted of a single metal joystick with fire button integrated to the tip.

by: Roberto Dillon "The Golden Age of Video Games: The Birth of a Multibillion Dollar Industry"

Larry Rosenthal, an MIT graduate who worked on SpaceWar! and who developed an innovative vector-based technology to display sharp images, joined Cinematronics soon after its incorporation in 1975.

Rosenthal left Cinematronics to start his own company, Vectorbeam, which, after releasing Tail Gunner, was acquired by Cinematronics with all of its assets and intellectual properties.

Though Cinematronics' first game were neither particularly impressive nor successful, Rosenthal's new technology set the stage for the development of Tail Gunner, the first game featuring true 3D vector-based objects.

The game was sold as Tail Gunner II in a sit down cabinet and its controls consisted of a single metal joystick with fire button integrated to the tip.

Tail Gunner's sound card was more complicated than any Cinematronics/Vectorbeam game before it. The cabinet uses the monitor's DAC to translate input from the joystick, so other games cannot necessarily be mounted in a Tail Gunner cabinet. so other games cannot necessarily be mounted in a Tail Gunner cabinet.

excerpt from the flyer:

Explore into a new realm of space combat as Cinematronics presents Tailgunner. Experience true three dimensional space video action. Examine the feature of this new game as it unfolds before you.

Player Features:

• Multiple directional high resolution sight control gives precise computer aided tracking of targets.
• Laser force shield provides the player with an additional defense system.
• Simple yet efficient control console featuring dual right and left player controls for maximum usability.
• Automatic progressive levels of difficulty gives the player increasing challenges as the score increases.

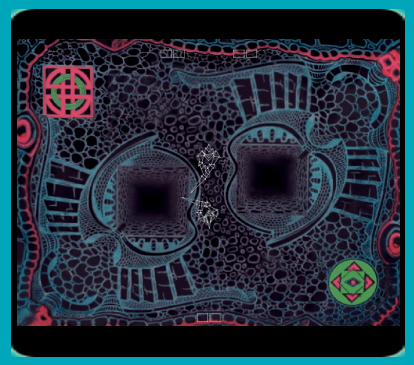
Operator Features:

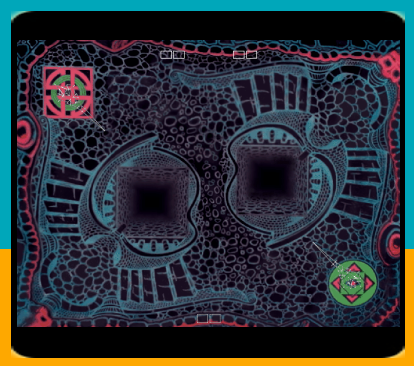
• Control console resists player damage and offers simple modularized construction for fast efficient maintenance.
• Duplicate shield and firing controls for maximum player usability.
• Coin accumulation circuit allows multiple game credits plus 1 or 2 coin per credit selectable option.
• Force shield units are option selectable in eight steps: 15, 20, 30, 40, 50, 60, 70, 80.
• Full 90 day warranty on major components.
• Dimensions:
70" H 30" D 26 1/2" W

1. INSERT COINS-ADDITIONAL COINS ADD CREDITS
2. JOYSTICK-POSITIONS ENERGY CANNON SIGHTS
FIRE BUTTON-TRIGGERS ENERGY BOLTS
SHIELD BUTTON-IF HELD DOWN WHEN SHIPS ARE LEAVING THE SCREEN,
SHIELDS WILL BOUNCE SHIPS BACK INTO TARGET AREA
LEFT-HANDED? USE ALTERNATE BUTTON SET
3. DESTROYING ALL THREE SHIPS SCORES BONUS OF ONE SHIP'S POINTS
SHIP VALUES- SLOW 7 PTS. MEDIUM-11 PTS.
FAST-17 PTS. ULTRA-FAST-23 PTS.
4. GAME IS OVER WHEN TEN SHIPS HAVE LEFT THE SCREEN
tailgunner

Warrior

Manufacturer *Vectorbeam*
Release *1979*
Class *Wide Release*
Genre *Fighting*
Mode *2 Players simultaneous*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: *Vector*
CRT: *Black and White*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*





Warrior is a 1979 arcade fighting game. It is considered one of the first fighting games, excepting several boxing games such as Heavyweight Champ, released in 1976, and Atari's unreleased Boxer (which was cloned as 1980's Boxing for the Atari 2600).

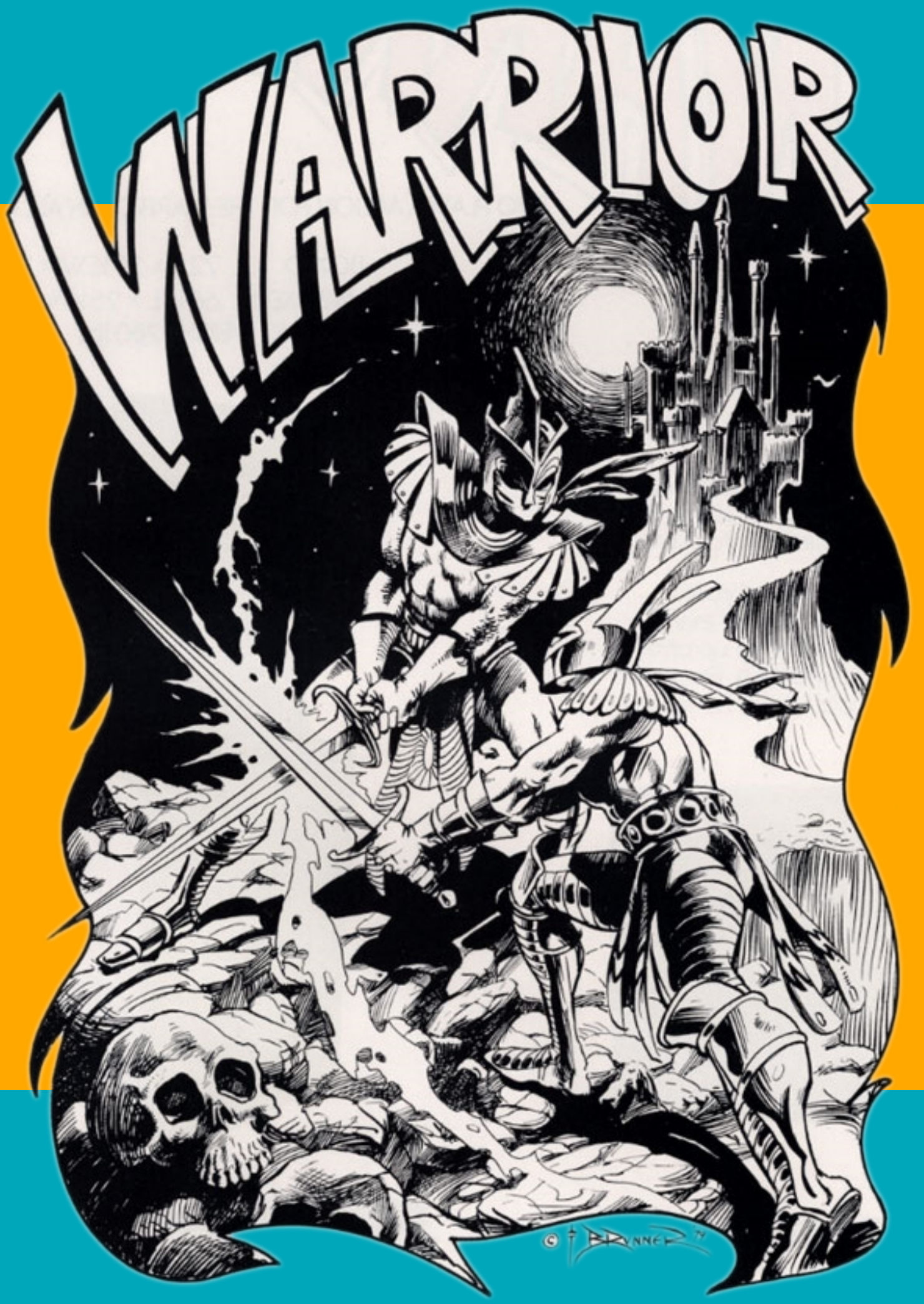
Developed by Tim Skelly while working at Cinematronics, it was released under the Vectorbeam company name shortly before Cinematronics closed Vectorbeam down; they had purchased the company in 1978. The game featured two dueling knights rendered in monochrome vector graphics and based on crude motion capture techniques. Due to the limitations of the hardware used, the processor could not render the characters and gaming environment at the same time and backgrounds were printed, with the characters projected on the top.

Originally Skelly planned for a two-player system with each player using two joysticks, one to control the movement of the player and the other controlling the player's weapon. However, financial constraints restricted the cabinet to one stick for each player and a button to switch between character and weapon modes. The sticks were produced in house and installed in cabinets in a way that players found unresponsive and difficult to use.

The cabinets and hardware were produced on a low budget and proved to be very unreliable when compared to contemporary machines. As a result, very few remain in working order, with 10 machines registered with KLOV ("The Killer List of Video Games") and only one known restored machine in the United Kingdom. Warrior is emulated by MAME.

It was a very rare game. There was only one way to buy this game, and that was in a dedicated cabinet, and only upright versions were available (weighing in at 280 lbs).

The marquee, monitor bezel, and control panel all had graphics of swords and energy beams. There were two joysticks on the control panel, and they were of a very sturdy design, and were probably the only thing that wasn't bound to fail.


WARRIOR

1979
228

Zero Time

Manufacturer *Petaco S.A.*
Release *1979*
Class *Wide Release*
Genre *Shooter*
Conversion *Namco Galaxian*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Controls
Joystick: *2-way (left, right)*
Buttons: *1 [Fire]*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*

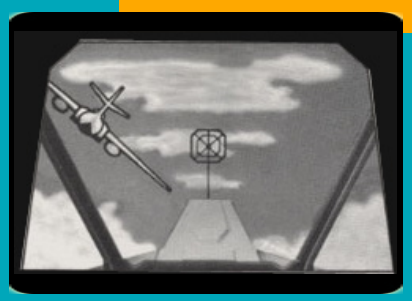
Zero Time may be a legitimate European license for Galaxian.
The title screen, written in Spanish, says;
“Attack In Zero Time
Mission: To destroy UFOs
Approximate UFOs Destroyed
Convoy - Attack”

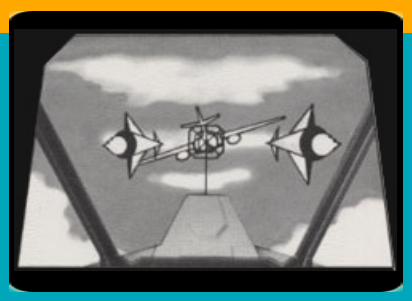
Zero In

Manufacturer *Namco*
Release *1979 (?)*
Genre *Shooter*
Hardware *Namco Mechanical*
Cabinet Styles *Upright*

Zero In is an arcade mechanical game released in 1979 by Namco in Japan only. It is a flight simulator where the player must use the handlebar to shoot incoming planes and missiles which dodging enemy fire. The game is a remake of an earlier Namco mechanical game, Zero Sen, from 1975.

“namco.wikia.com”

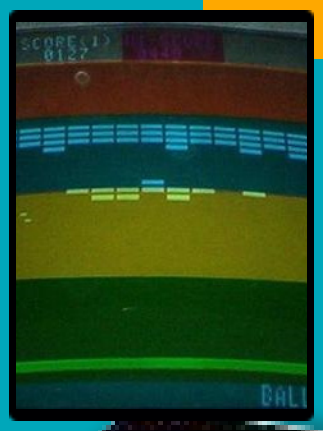




ZunZun Block

Manufacturer *Taito*
Release *1979*
Class *Wide Release*
Genre *Breakout*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Cocktail*

ZunZun Block runs on Taito Discrete Logic hardware and is a clone of Breakout that uses cellophane strips on the monitor to act as color. Not much is known about the game since it is unavailable in MAME even though there are users claiming to own original boards. Using the rotary knob, the player must hit the ball with the paddle to break all of the bricks on the screen. A small green propeller-like object will sometimes appear at the centre of the screen, and the formation of bricks will move down if hit.



4 Square

Manufacturer	*JRW Electronics*
Release	*1970s (?)*
Class	*Wide Release*
Genre	*Ball and Paddle*
Cabinet Styles	*Cocktail*

excerpt from the flyer:

SUPER GAME

4 Square is a major step forward in versatility and exciting player appeal, having unique features for either 1, 2, 3 or 4 players. It is the cocktail video game that people have been waiting for, with features unmatched by any other table game on the market.

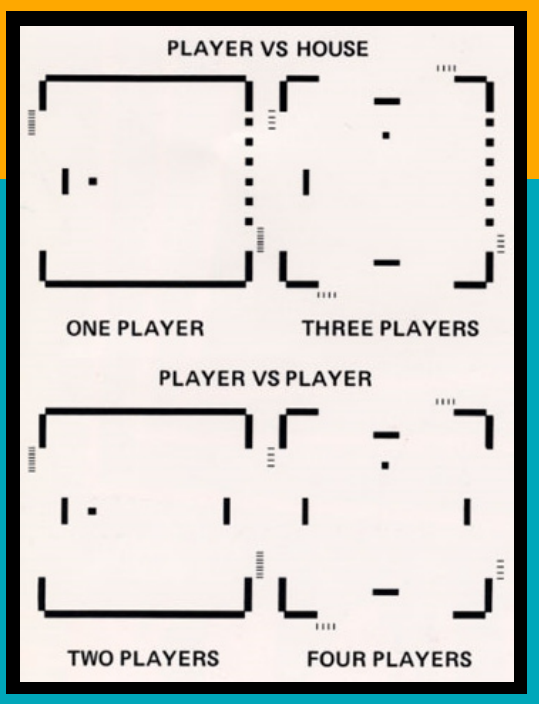
VISIBILITY

The game controls are clearly visible through the 3/8" solid-state plate glass top - now spilled drinks are no problem!

SERVICE

The distinctive wrought iron frame is almost indestructible and supports a naugahyde covered shell that lifts off for major repairs. Minor T.V. adjustment are performed with controls conveniently placed inside the coin door.

Start those quarter plunking into your giant new cashbox today!!



5 Games

Manufacturer *Elcon Industries*
Release *1975 (?)*
Class *Wide Release*
Genre *Ball and Paddle*
Hardware *Discrete Logic*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White with a Color Overlay*
Cabinet Styles *Cocktail*

5 games, feature the games; Tournament Tennis (2 or 4 Players), Super Soccer (2 Players), Gravity Ball (2 or 4 Players), Elimination I (1 Player), Elimination II (2 or 4 Players).

Novice or Pro skill level selection for shorter paddle and slam ball buttons to change ball movement when the players opponent tries to hit the ball. Black and white TV screen with orange overlay to give it color.

The game is probably a clone of Take Five.

mamedev.emulab.it"

Collision

Manufacturer *Video Games Gmbh*
Release *1970s*
Class *Wide Release*
Genre *Maze*
Mode *2 Players*
Gameplay *Alternating*
Panel Layout *Single Player*
Monitor
Orientation: *Vertical*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright Mini*

Collison, a copy of Head On, is a driving maze game from Video Games GmbH. It was only released in Germany.

Dogfight

Manufacturer *Bo Mak Electronics Inc*
Release *1970s*
Genre *Shooter*
Gameplay *Competitive*
Monitor
Orientation: *Horizontal*
Type: Raster: *Standard Resolution*
CRT: *Black and White*
Cabinet Styles *Upright*

excerpt from the flyer:

FEATURES:
1. Two airplanes battle across a video sky
2. Realistic sound of whining motor and machine gun for each plane.
3. Cloud drift across sky for special effects and strategy.
4. Exclusive joy stick control made by Bo Mak Electronics. (no parts touch - no wear)
5. Quarter or fifty cent play switch. (you select)
6. Motorola 19" monitor.
7. Smartly styled cabinet blends with any decor.

Danger Track

Manufacturer *Recel SA*
Release *(?)*
Class *Wide Release*
Genre *Racing*

excerpt from the flyer:

A New Era in Automatics...
Fully Electronic:
The most COMPLETE Driving Sensation.

Reproduction of the picture on the screen, simulates reality when driving a car.

Fully automatic transmission (no clutch, no gears).

With steering wheel, brake and accelerator.

Inertias when accelerating and decelerating. This is not a closed circuit run, as the picture is always different.

If the car goes off the road, faults are marked up rhytmically on the Counter Unit (up to 1000). There is alos a Km. Counter (up to 1000).

The game is on an adjustable time basis and you can win extended play when you reach the present number of Kms., without scoring any faults.

The car's movement is accompanied by continuous changes in the scenery, lacking all synchrinisms.

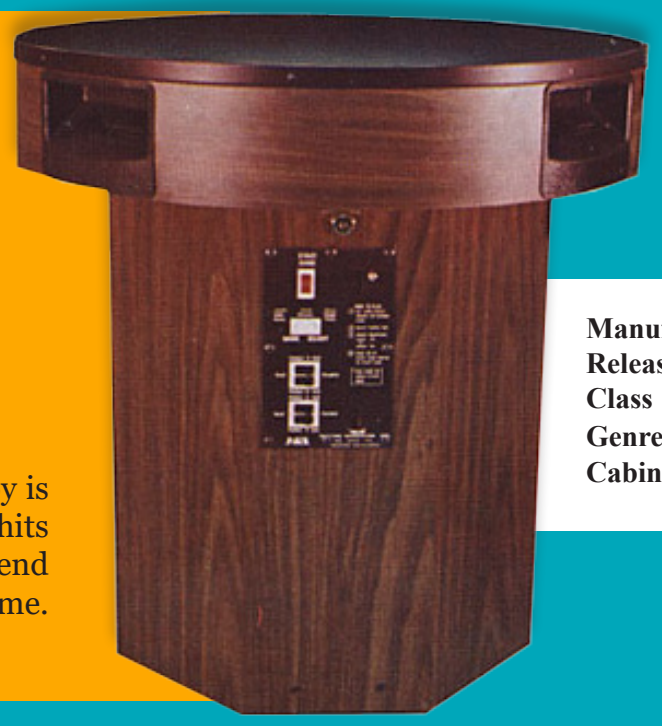
Paddle Derby is a color Pong variant. Unlike Pong players do not score when the ball hits the edge of the screen. Players earn points when they hit the ball. Coloured bars fill up showing who has the most points, when one of the bars fills up that player wins. The game can be played wy up to four players.

"mobygames.com"

excerpt from the flyer:

MODEL 752

An exciting new concept in paddle games, Paddle Derby is a blazing race between opponents - each time a player hits his ball, his color bar advances. The first player to the end of the track wins! A one-, two-, three-, or four-player game.



Paddle Derby

Manufacturer	*Nutting Associates*
Release	*1972-1975*
Class	*Wide Release*
Genre	*Ball and Paddle*
Cabinet Styles	*Cocktail*

F-114

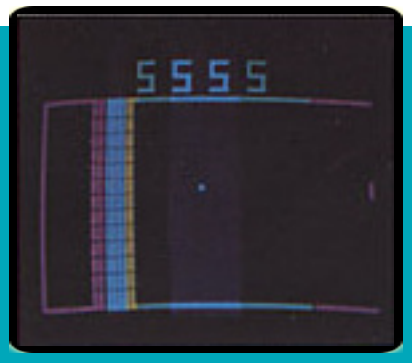
Manufacturer	*Allied Amusement*
Release	*1975 (?)*
Class	*Wide Release*
Genre	*Shooter*
Mode	*1 Player*
Gameplay	*Single*
Panel Layout	*Single Player*
Monitor	
	Orientation: *Horizontal*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Deluxe*

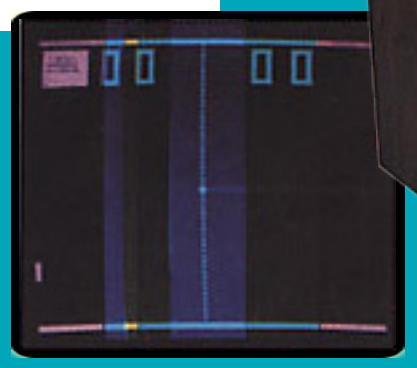
F-114 is an airplane simulation. Players shoot down the enemy aircraft as they sway from left to right. Streaks of light scroll across the screen to simulate clouds.

Dimensions:
63" high
46" wide
28" deep
(chair) 20" deep
Weight: 470 lbs.

Grand Slam VIII

Manufacturer *Century Consolidated Industries*
Release *1976 (?)*
Class *Wide Release*
Genre *Ball and Paddle*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: *TV Monitor*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Cocktail*

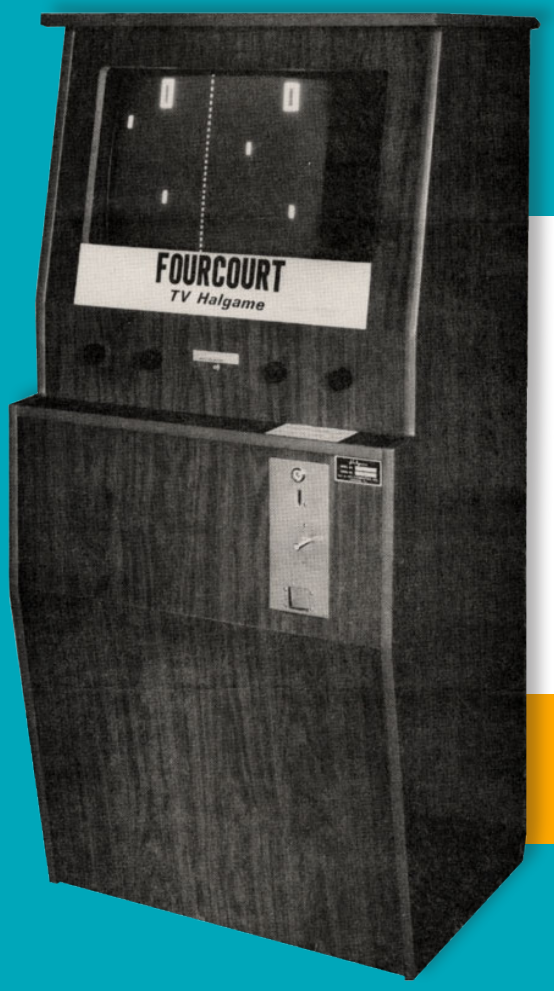




excerpt from the flyer:

1, 2 or 4 players
The uniqueness of the Grand-Slam VIII Video Game Cocktail Table is that we have combined the five most successful video paddle games into one compact aesthetically pleasing cocktail table, because of this, the Grand-Slam VIII will be at home in even the most exclusive locations.

The many different play possibilities guarantee daily receipts superior to the average and this innovative multiple game feature helps to prolong interest and playing both by eliminating the boredom that eventually sets in with simple video games. The additional extended play feature also acts as an incentive to players to improve their play.



Four Court

Manufacturer *Hal Computers*
Release *1970s*
Class *Wide Release*
Genre *Ball and Paddle*
Gameplay *Competitive*
Panel Layout *Multiple Player*
Monitor
Orientation: *Horizontal*
Type: *TV Monitor*
CRT: *Black and White*
Cabinet Styles *Upright*

Four Court is a Pong clone from Hal Computers.

excerpt from the flyer:

GET READY FOR A SHOWDOWN!

It's Jacks or Better to win in Meyco's new fun-filled Poker game. The computer deals a mean hand so your customers keep coming back for the challenge. And the stimulating, realistic sounds it produces are a real crowd pleaser. Jacks A Pair's 13" or 19" screen is enclosed in an attractive woodgrain cabinet and is available in both color and black and white. Wheter you choose and upright or lounge model you can't lose, because they're both PROGRAMMED FOR PROFITS.

Get in the game. It's a good deal.

Creators of Joker's Wild, Casino Blackjack, Wild Arrow and Montana Draw Electronic Blackjack, Wild Arrow and Montana Draw Electronic Games.

This Entertaining Showdown Poker Game Features:

- PROGRAMMED FOR PROFITS
- Available in Color or Black and White
- Built in Self-test
- Microprocessor Circuitry
- Proven Bookkeeping System
- Multiple Play (1-8 Coins)
- Monitor Readout and Activity Meters
- Reliable Coinco Coin Assembly
- Factory System
- Complete Service Manual Included
- Slide-out Chassis for Easy Service
- Formica Woodgrain Cabinet

Jacks A Pair

Manufacturer	*Meyco Games Inc.*
Release	*1970-80s*
Class	*Wide Release*
Genre	*Card*
Mode	*1 Player*
Gameplay	*Single*
Panel Layout	*Single Player*
Monitor	
	Orientation: *Horizontal*
	Type: Raster: *Standard Resolution*
	CRT: *Color*
Sound	*Amplified Mono (one channel)*
Cabinet Styles	*Upright* *Cocktail*

Inca Boss

Manufacturer	*PMC*
Release	*1970s*
Genre	*Ball and Paddle*

Inca Boss is believed to be similar to Aztec Princess.

TV Davis Cup

Manufacturer	*Kasco Distributing Co.*
Release	*1970 - 1980s*
Genre	*Ball and Pddle*
Cabinet Styles	*Upright*

Zero Fighter Kamikaze

Manufacturer *Leisure & Allied Industries*
Release *1976 (?)*
Class *Leisure & Allied Industries*
Genre *Shooter*
Cabinet Styles *Upright*

Zero Fighter Kamikaze was developed by Fuji Enterprise as Kamikaze and licensed to Leisure & Allied.

The game might be discrete logic.

excerpt from the flyer:

- Air to Air Combat
- Joy Stick and Missile Control
- Realistic Sound Effects
- 3 Speed Selector; Novice-Good-Pro

Twenty one

Manufacturer *Omega Products*
Release *1975 - 1985*
Genre *Card*
Monitor
Orientation: *Vertical*
Type: Raster: *Standard Resolution*
CRT: *Color*
Sound *Amplified Mono (one channel)*
Cabinet Styles *Upright*